Issue 140
PS
1964 Series
THE PREVENTIVE MAINTENANCE MONTHLY
PM HEADS OFF TROUBLE
SEE PAGE 29
GROANNNN... I CAN'T FIGURE WHY WE SUDDENLY WENT OUT OF CONTROL!
IF YOU'D DONE YOUR PM RIGHT... THIS WOULDA NEVER HAPPENED.
© Will Eisner

THE "BRAINS" OF THE OUTFIT —

TELL

The brains of the outfit—that's you.

And nobody's to dispute it, for sure.

What we mean is there's nobody—absolutely nobody—but you who knows the most about how your equipment works (or doesn't work) . . . and how the maintenance and supply systems work (or don't work). And what can be done about it.

Yeah, you say, just who wants to listen to me?

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OK, so your brain is all awhirl and boiling over with ideas to make things better . . . how do you tell him?

Well, there are several ways, depending on what's the problem. Try these—

You can turn in a Suggestion on practically anything. Jot down on a DA Form 1045 the problem as you see it and the solution you suggest. Shoot the form into your local Suggestion Committee. They'll take it from there . . . all the way to Army topside if necessary.

Suggestion

(CPPM 1, Section 12)

INSTRUCTIONS TO SUGGESTER
1. Complete all information requested except "Suggestion Number".
2. Use additional sheets of paper and include drawings or pictures as necessary.
3. Place in suggestion box, deliver to your supervisor, or deliver or mail to the Local Incentive Awards Committee.

SUGGESTION NO.

NAME OF SUGGESTER (Last, first, middle initial) — MR. / MISS / MRS.: SMITH, THOMAS R.

POSITION TITLE AND GRADE (Or Military Grade and SN): MECHANIC 15316114

INSTALLATION: FORT AIRBORNE, TEXAS

ORGANIZATION: CO. B, 1199 ENGR BN

OFFICE OR SHOP PHONE: 4-1652

NAME OF IMMEDIATE SUPERVISOR (Complete only if discussed with supervisor): SGT. HOWARD B. JONES

SUBJECT OF SUGGESTION: SUPPLY PROCEDURES

The acceptance by me of a cash award for this suggestion shall constitute an agreement that the use of the suggestion by the United States shall not form the basis of a further claim of any nature upon the

DATE: 30 Jul 64

SIGNATURE OF SUGGESTER: Thomas R. Smith

On equipment, your message form is the EIR (Equipment Improvement Recommendation, DA Form 2407). And it's one on which you can wax eloquent with ideas, photos, sketches . . . anything that will help tell the story. Be sure to tell why your idea is better than what you're using. The emergency and urgent EIR's go direct to the National Maintenance Point which has the engineering responsibility for the equipment and routine EIR's go to the Logistics Data Center, Lexington, Ky.

SECTION III - EQUIPMENT IMPROVEMENT RECOMMENDATION

29. NORMAL REPLACEMENT (Select one-use or X): [1] YES [2] NO

30. EIR (Select one - use ✓ or X): [E] EMERGENCY [U] URGENT [R] ROUTINE ✓

31. RECOMMENDATION (Select one - use ✓ or X): [A] IMPROVE DESIGN ✓ [B] MODIFY [C] REVISE PROCEDURE [D] OTHER (Specify)

32a. ORGANIZATION/ACTIVITY: STCFCT: 40L

c. ORG ACT IDENT CODE:

b. LOCATION: APO [illegible] HQ, 7TH ISO

d. SUBMITTED BY:

33. FEDERAL STOCK NUMBER: 4310-679-6917

34. NOUN NOMENCLATURE: AIR COMPRESSOR

35. OPINION OR REMARKS. DESCRIBE CONDITIONS UNDER WHICH FAILURE OCCURRED. ATTACH PHOTOS OR SKETCHES, IF AVAILABLE.

IT IS RECOMMENDED THAT the COMPRESSOR'S BATTERY box BE IMPROVED SO AS to eliminate ACID CORROSION OR WATER DAMAGE to PARTS ON WHICH BATTERY DRAINAGE FALLS. THIS CAN BE DONE BY INSTALLING RUBBER TUBING 3/8-in. to 1/2-in. IN DIAMETER ADAPTED to the BATTERY POST.

DA FORM 2407 REPLACES

On publications, you use DA Form 2028. On it you tell what's wrong and what's right (if you know). Shoot it direct to the outfit that prepared the manual; the address is generally somewhere near the front of the book.

That's how you tell your favorite Uncle. He'll be real pleased. And, most important, your ideas will help him give you better fighting equipment.

Let him know—today.

TYPED NAME, GRADE, OR TITLE

DA FORM 1 APR 64 2028

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TELL THE MAN

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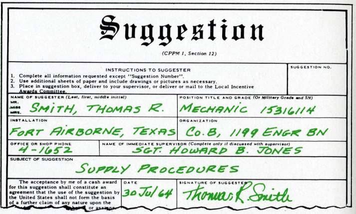

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INSTALLATION: FORT AIRBORNE, TEXAS	ORGANIZATION: Co. B, 1199 ENGR BN
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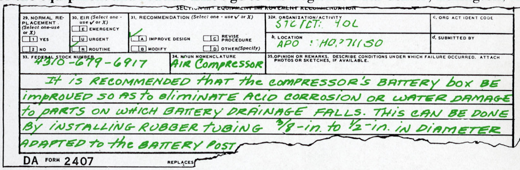

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33. FEDERAL STOCK NUMBER: 4310-679-6917	34. NOUN NOMENCLATURE: Air Compressor	35. OPINION OR REMARKS. DESCRIBE CONDITIONS UNDER WHICH FAILURE OCCURRED. ATTACH PHOTOS OR SKETCHES, IF AVAILABLE.		

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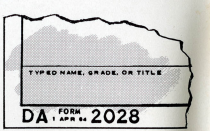

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DA FORM 1 APR 64 2028

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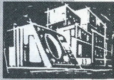

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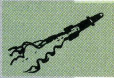

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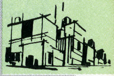

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THE MAN

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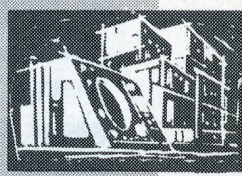

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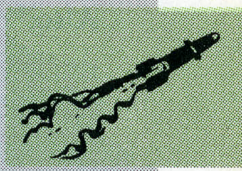

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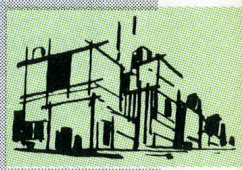

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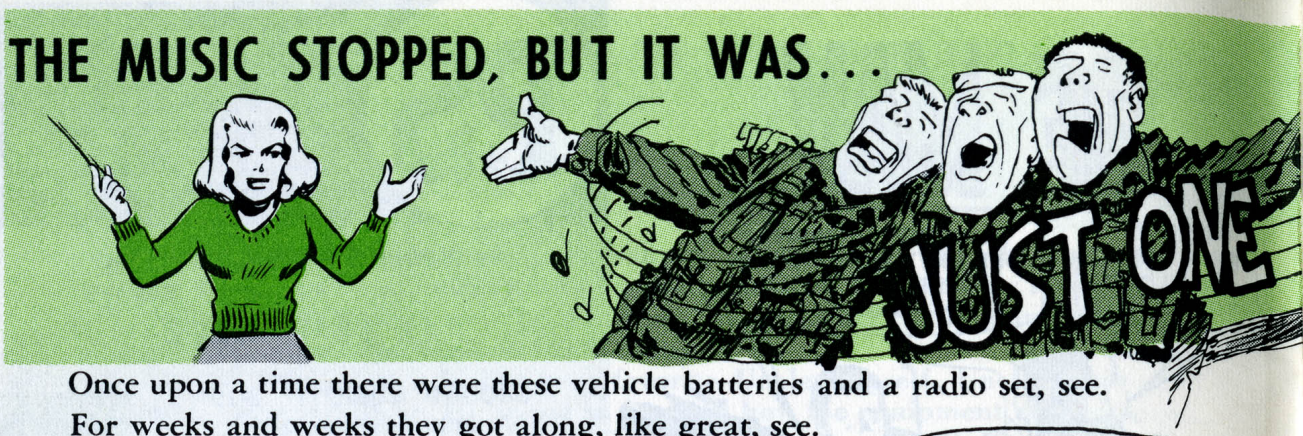


Once upon a time there were these vehicle batteries and a radio set, see.

For weeks and weeks they got along, like great, see.

The batteries would zing merrily to their generator: "I Get a Charge Out of You."

And the radio would hum to the batteries: "You Do-o-o Something to Me."

The voltage regulator, in harmony, would add: "I've Got You Under My Skin; I Won't Let Voltage Surge In."

Then, one unsunny day, the happy little combo got it in the gizzard.

One of the vehicle's batteries had to be replaced.

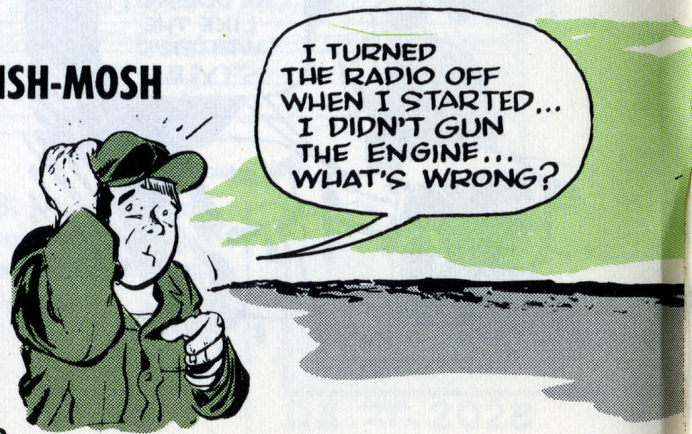
Shortly after, the transistors in the radio burned out. Not much later, a power tube went. Then, the dynamotor got fouled up. And the relays started sticking.

Also, reception and audio output dropped. So did transmitter RF output. And . . . well, you probably know the other details.

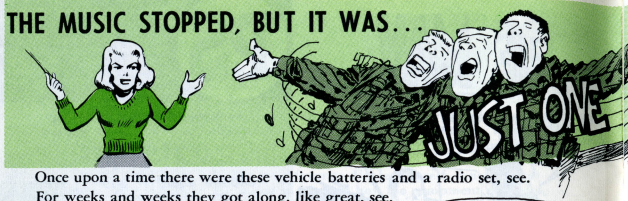
The "choir" leader, a driver-radio operator, couldn't figure it. Soon as he got one thing on his radio set straightened out, somethin' else would kill the harmony.

MIS-MATCH MISH-MOSH

You see, this lad knew you don't start a vehicle with the radio turned on. So he never did. And he knew you don't gun your engine with the radio on. This, too, could damage the radio via voltage surge. So he never did.



THE MUSIC STOPPED, BUT IT WAS...



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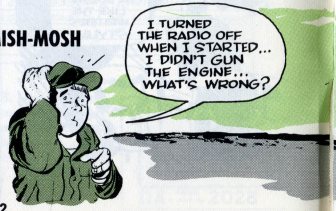


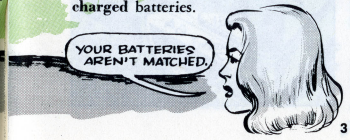
OF THESE THINGS

What he didn't know was that mis-matched batteries can do as much to make a radioman's life miserable as any other disease known to balanced electrical current.

Well, there was this ol' maestro, see (somebody called him "sarge" or "Sergei" or somethin' like that). And he proceeded to educate this young bucko in language as sweet and colorful, almost, as the good symphony of harmonized radio-battery-generator-voltage regulator.

The maestro tuned up on the ol' bit about slow-but-steady acceleration holding down voltage surge. Then he chimed his vocal chords in on the reason for the discord aforementioned . . . mis-matched batteries. The music went thus:

Most Army vehicles use a 24-volt system of two 12-volt batteries connected in series. Whistle—**connected in series.** That's the prelude, meaning best performance comes from **equally charged** batteries.



If one battery has a full charge and the other hasn't, it means the full-charged one is gonna be damaged because it has to accept a higher charging rate. In the least, the situation'll strike a long, sour note with the full-charged one preventing its mate from catching up in charge.

Which means your generator is gonna hafta do more work, too, to make up for the weaker battery. Which means you're gonna have voltage surge,

MORE

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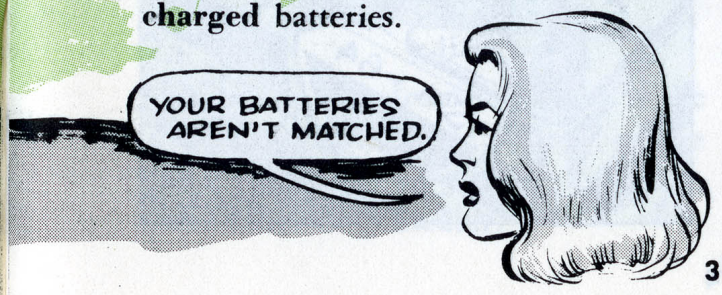

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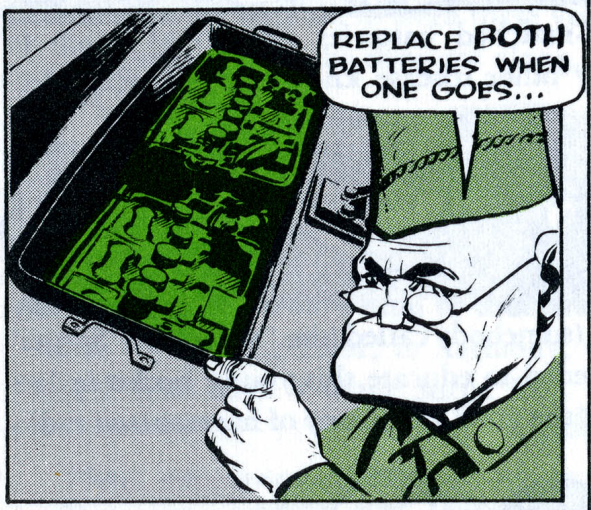
P.S. MORE

or high-surge current. And that means, simply, that a rundown battery is gonna create a lot of radio disharmony.

So how do you make sweet music again?

BALANCED BATTERIES

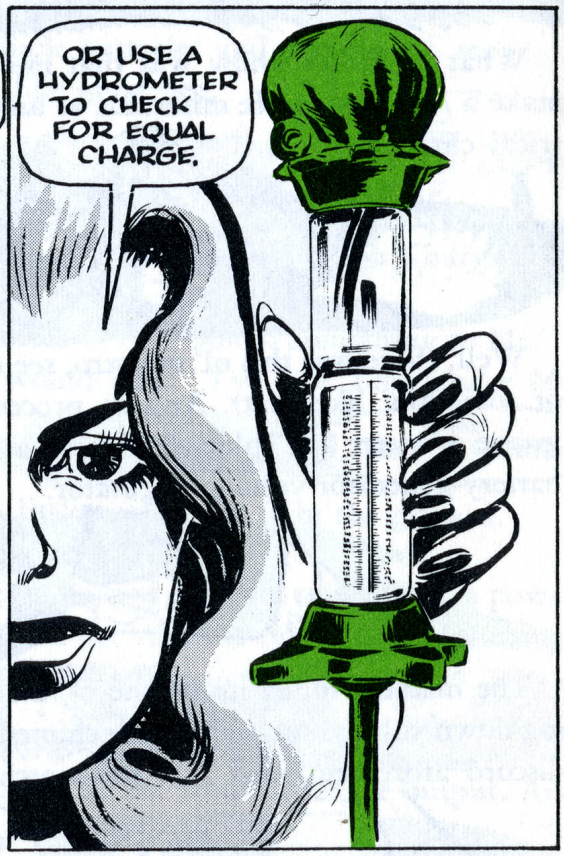
The easiest way is: When one battery goes, replace both with fully charged batteries from the charging rack.



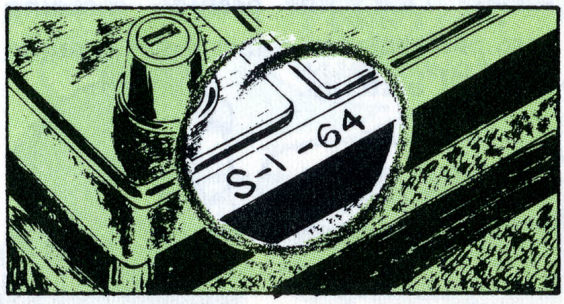
Or, use a hydrometer as per TM 9-6140-200-15 to see if the battery you're leaving in the vehicle has a good charge. A hydrometer specific gravity reading of 1.280 will keep your radio humming nicely, but anything from 1.250 to 1.300 is acceptable. If the reading is 1.225 or less, take it out and get it recharged, too. Never let a battery drop below a reading of 1.200 (except in the tropics, in which case check the TM).

In any case, the specific gravity readings of both batteries shouldn't vary more than 25 points (1.250 to 1.275, etc.), and their voltage shouldn't vary more than .2 of a volt. Double-check all of para 45c, page 50, of TM 9-6140-200-15 for more dope on those variations.

If you get the same full-charge reading from both batteries, you've really got it made.



However, you also should check the date stamp on the replacement battery —especially when you're using it to power a radio. If the battery's nearing the end of its normal life span (TM 9-6140-200-15 clues you), select another one.



If there's too much difference in the expected life spans of the batteries, one could run down before the other and start your troubles all over again—even tho they're both fully charged when you put 'em in. The date stamp is near the negative(—) post and would read, f'rinstance, **S-1-64** if it went in service in January 1964. The "1" is the month and the "64" is the year.

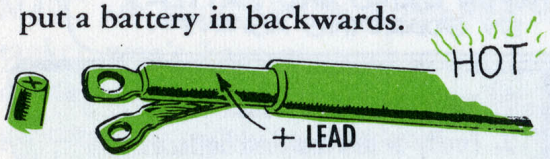
If the condition of the battery is questionable give it the high rate discharge test as per para 13e of TM 9-6140-200-15.

CONNECTIONS, TOO

Low-charge batteries and a heavy foot on the accelerator aren't the only causes of high surge current. Loose or dirty connections and poorly grounded straps can overwork your battery, too, and discharge it.

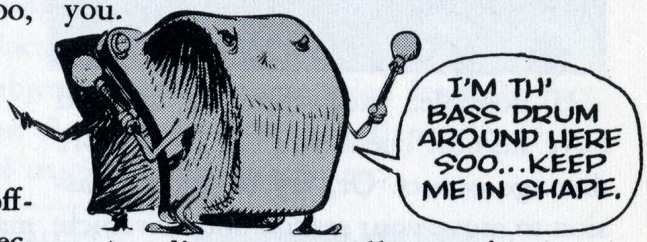
You steer away from those off-key notes with tight, clean connections; good, solid grounding, and well-charged, up-to-date batteries.

To avoid the strident wail of tortured transistors bellowing "Smoke Got In My Eyes," watch out for reverse polarity . . . or reverse voltage. Make sure you connect the hot power leads from the radio to the positive (+) post of the battery, and be extra careful not to put a battery in backwards.

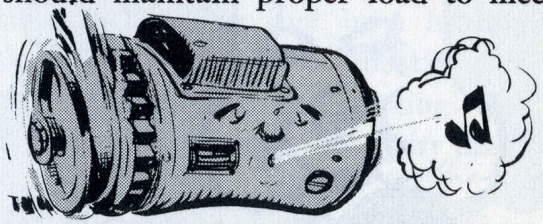


The big bass drum in the act is the voltage regulator. A faulty one, or one not adjusted right, can really cream your radio or generator.

The regulator normally is adjusted at 27.5 volts. Your support does the adjusting, and they do the checking when the regulator's suspected . . . not you.



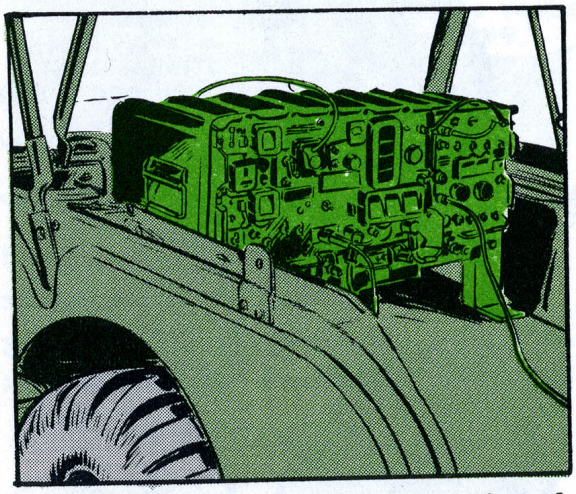
A radio set, naturally, requires more output from the batteries than the batteries can maintain when the vehicle's idling normal-like. Which means the batteries have gotta get help from the generator to carry the load. So, an engine idled about 200-RPM over normal (normal would be no radio hook-up) should maintain proper load to meet



radio current draw. Your support takes care of this, too. If the engine's not idled up, the radio'll drain the battery.

P.S. MORE

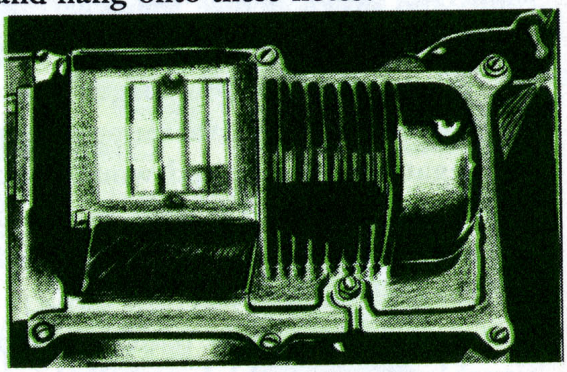
Good cues on low output are failure to load on low frequency, decreased audio and transmitter RF output, sluggish or chattering relays, a slowdown of blowers and dynamotors. There could be internal reasons in the radio for this, but . . . when they happen at the same time, or a couple of them happen at once, suspect low voltage.



If possible, turn your set off and have support check you out . . . before damage occurs. Or, try to get permission to move your set to another vehicle (and don't forget to tune the radio to the new antenna setup).

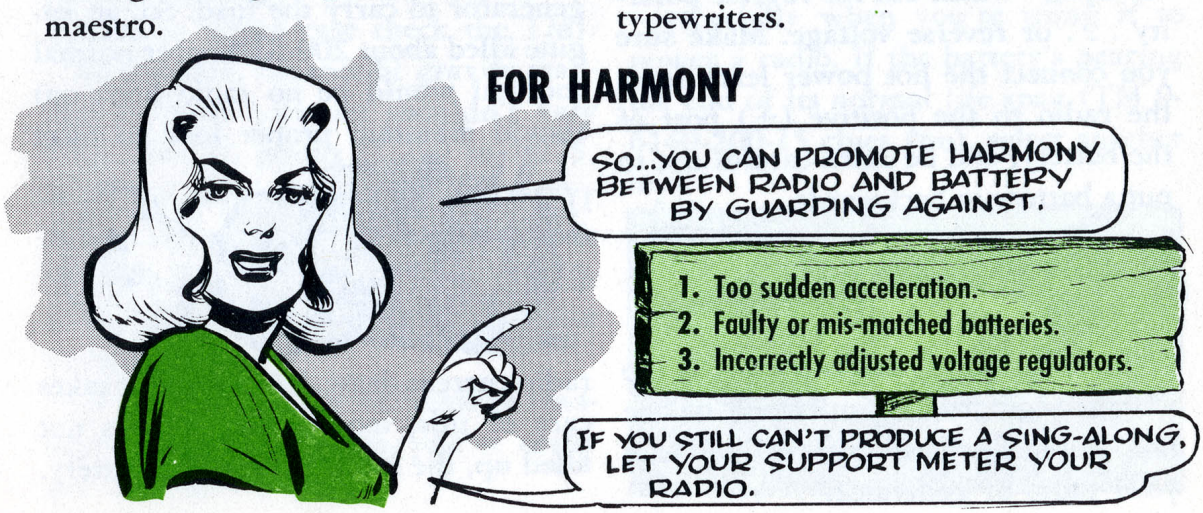
Do, re, me, fa, so-o-o: Now's about the time that happy music should be coming through again, chortled the maestro.

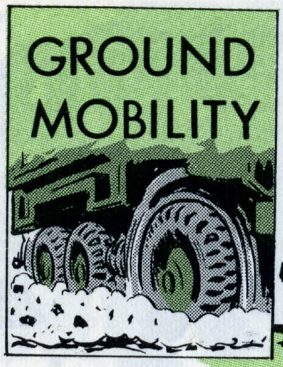
To keep it that way, grab your bugle and hang onto these notes:



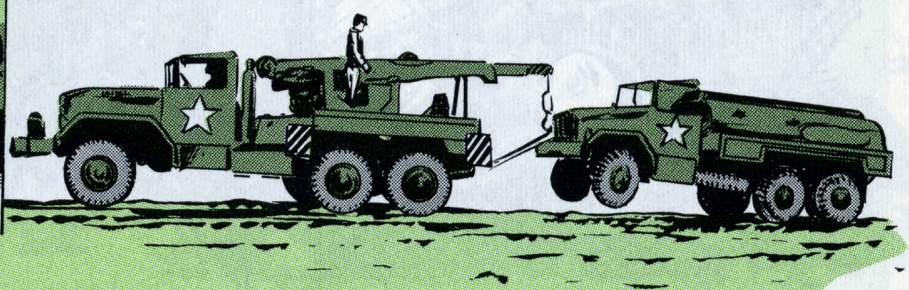
1. SB 11-131 calls for a 100-amp generator kit in many vehicles because of the current demand of radios. Make sure your vehicle has the kit if it's authorized.
2. Start your vehicle . . . and then turn on the radio. Let the set warm up a few minutes before using it.
3. Idle the engine at about 200-RPM over normal for radio use. This prevents severe voltage drop when you key the transmitter or apply maximum load. But, and it's a big BUT, don't over-accelerate. Idling at too high RPM can cause overheating and other vehicle maintenance problems.

Also, ¼- and ¾-ton vehicles normally are equipped with 45-ampere-hour batteries. However, TB 9-2320-212-20/2 authorizes installation of a 100-ampere-hour battery, FSN 6140-057-2554, in M37 and M37B1 ¾-tons which have the AN/GRC-46 radio teletypewriters.





TANKER TOWING



Dear Half-Mast,

What Army regulations cover towing loaded M49C tankers when they break down on the road?

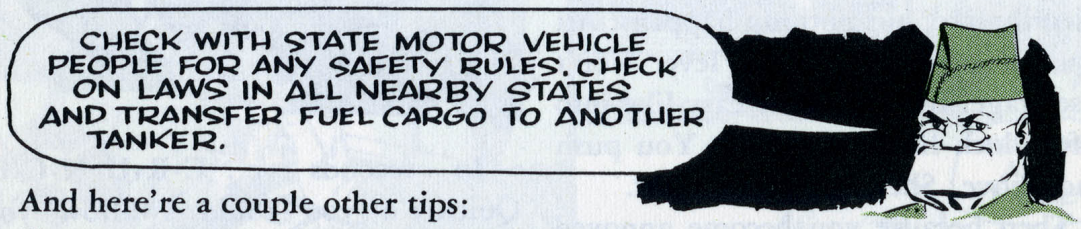
CWO R. H.

Dear Mr. R. H.,

There're no Army regs that spell out exactly how you tow a crippled fuel-toting tanker, but you can adapt the dope in certain pubs to meet the emergency.

For instance, Para 96 of FM 20-22 (Oct 62) and Para 80b of TM 9-8022 (Dec 54) offer helpful hints on general towing.

First, however, check with your local or state motor vehicle people for any safety rules they may have on the subject. Keep your operation legal. In fact, you'd be smart to check in advance on the laws in effect in all nearby states, too, just in case you ever have to send trucks on maneuvers, etc.



And here're a couple other tips:

If your crippled tanker has motor trouble but can still be towed, follow the same precautions you would if the tanker could go on its own power. But be extra careful. Chapter 4 of TM 10-1113 (Sep 59) w/Change 1 (31 May 63) has the word on this.

Just remember that the dangers that exist in carrying fuel in a healthy M49C are multiplied in a crippled vehicle since the driver of the disabled tanker won't have as much control over starting, stopping and steering. One of the real dangers to watch out for, as you know, is the static electricity that's generated by sloshing gasoline.

If the crippled tanker has to be moved with a wrecker (meaning it has to be lifted front or rear to be towed) by all means first transfer the fuel cargo to another tanker. Paras 51 and 53 of TM 10-1113 have the best dope on loading and unloading fuel.

Half-Mast

Has this ever happened to you after working the front winch of your M62 wrecker.

Your recovery job went smoothly. Not a hitch. You're congratulating yourself on the way you can handle this baby.

Now you're all set to start rolling 'er home.

You yell at your assistant to climb aboard.

You dash around to the front to make the winch ready for road travel.

You grab the drum clutch lever friendly-like, but nothing happens. All you get is resistance. The lever won't disengage. It won't slide easy-like into safety lock like she should. You push and shove. She's grabbing tight.

Then because you become annoyed at this pesky little thorn in your otherwise smooth job, or because you're tired, or eager to get home—or simply because the lever's never done this before that you know of . . . you get tough. Up you go on the bumper. You haul off and give the lever a solid kick with your heel . . . or maybe you reach for a bar and force it just to let that little lever know who's boss.

In seconds . . . C-R-U-N-C-H! Quicker'n you could swallow your gum you had yourself a busted winch.

It's a sure thing. Anytime you pull these, or any other strong-arm tricks on this lever you'll quickly bust the clutch yoke pin; and you may also break the lever's handle.

It's a serious hurt for your M62. It means she gets deadlined for a major winch disassembly job. Removing and replacing that tiny pin calls for heavy work.

All this woe can be avoided with patience and a bit of understanding.

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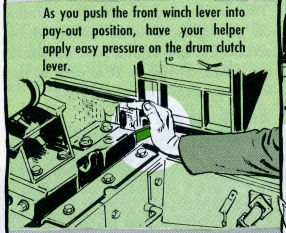
WINCH

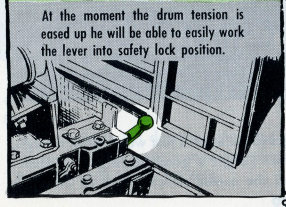
There are two quick and simple ways. Anytime the drum clutch lever refuses to disengage with just normal pressure from your hand:

1 Jump back in the cab and ease up on the drum tension just a wee-bit.

As you push the front winch lever into pay-out position, have your helper apply easy pressure on the drum clutch lever.



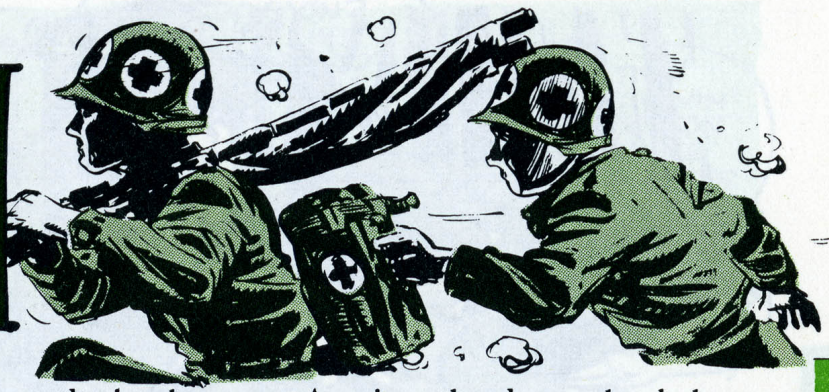
At the moment the drum tension is eased up he will be able to easily work the lever into safety lock position.



2 Go by the warning plate right there by the lever. It says:

WARNING!
DO NOT FORCE CLUTCH LEVER TO FREE DRUM CLUTCH ENGAGE POWER TAKE OFF IN FORWARD OR REVERSE GEAR AS REQUIRED AND SLIP ENGINE CLUTCH SLIGHTLY

WINCH



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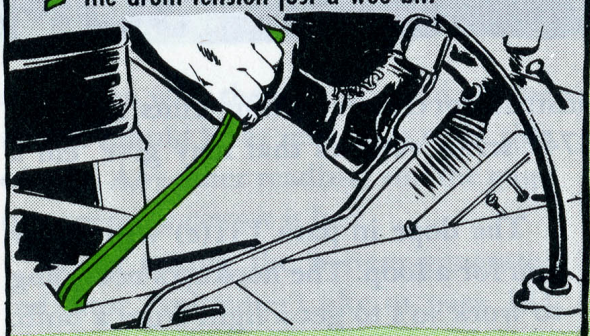

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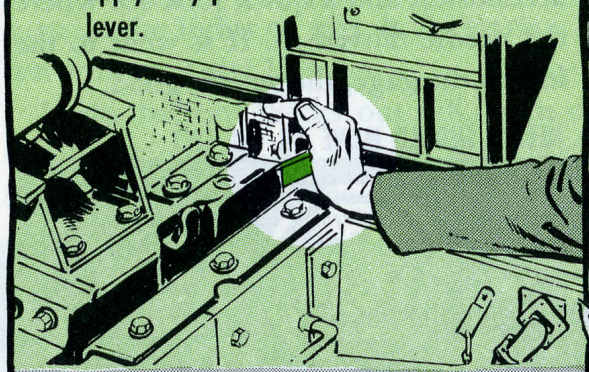

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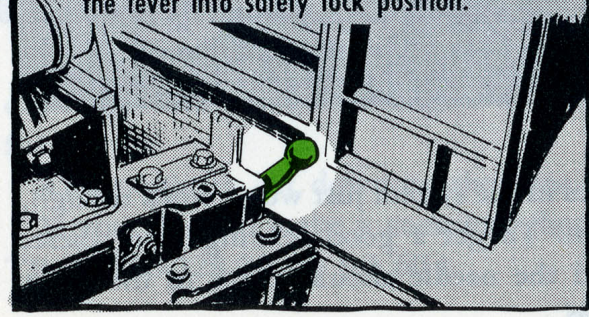

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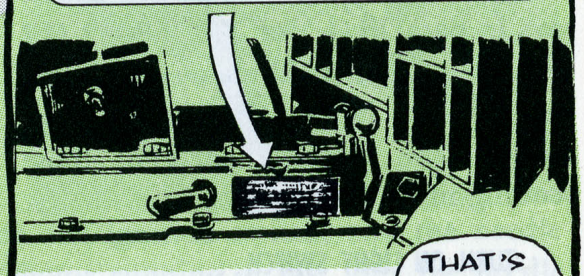
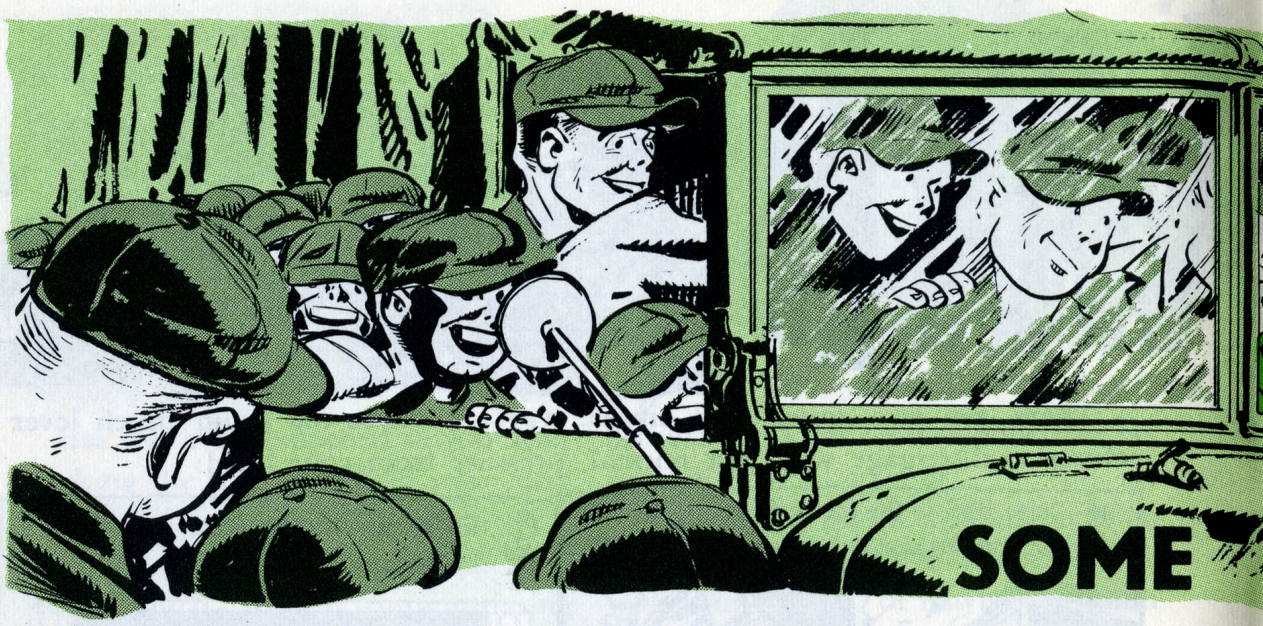


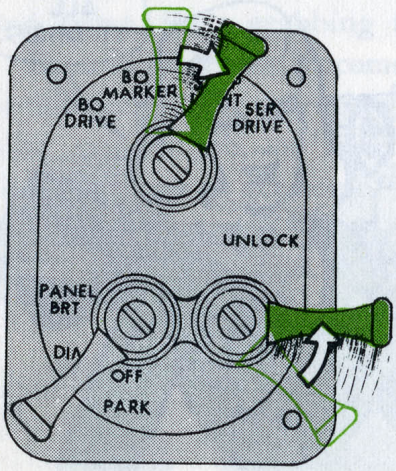


Here're a few tips on checking the instrument cluster sending units, switches and circuit breakers in your 2½-ton G742-series vehicles that may give 'em a longer life.

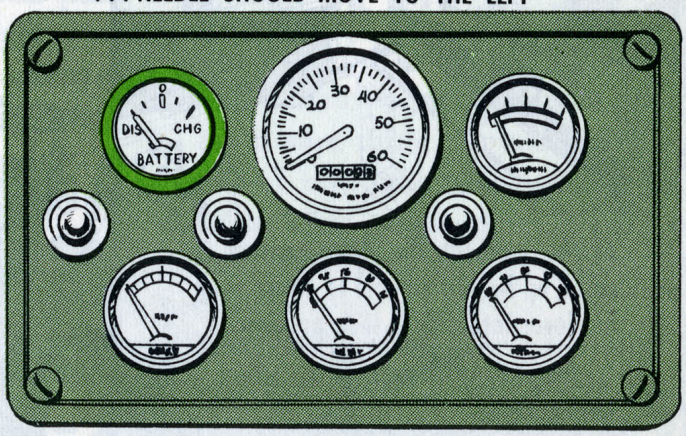
A 3-candlepower bulb, like the ones used in the instrument panel, should be enough to test the sending units like it says in para 131(e) of TM 9-8022 (17 Dec 54). A high candlepower bulb like the 24-volt lamp listed there may damage the sensitive parts of those sending units.

The dope in para 131(c) will throw you for a loop. The hookup's not going to work so's to get a light from a bulb. The ammeter can be tested by turning on the lights or other current draw accessories, and a quick look-see where the needle moved to. If it went to the left on the gage, the gage is good.

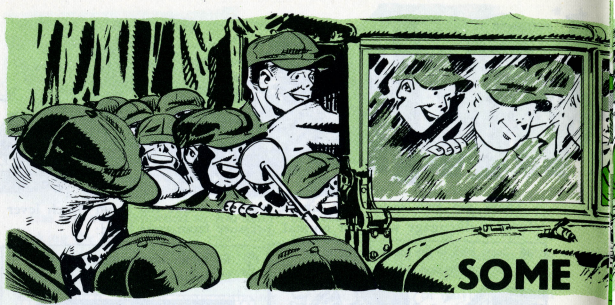
TURN ON LIGHT SWITCH . . .



. . . NEEDLE SHOULD MOVE TO THE LEFT



Making this test with some of the gages in the system just won't work though, 'cause, of the stout shunts built into 'em. To get a good reading from these, start the motor and run at fast idle and the needle should point to the right



SOME CHANGES

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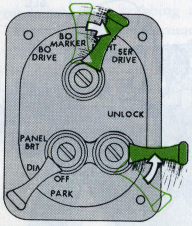

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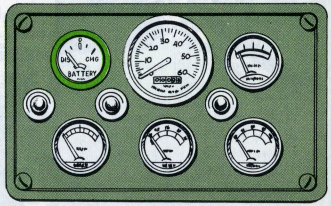

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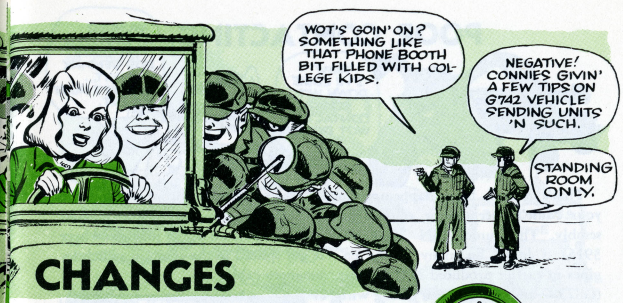

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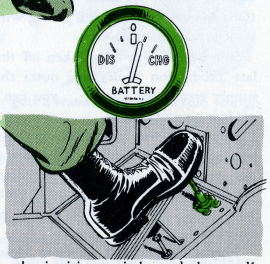
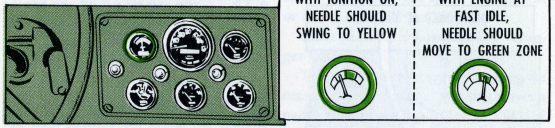


When testing the battery-generator indicator (voltmeter) like in para 131 (d), first, give the battery a quick test. It's not necessary to put them on the load banks or use the hydrometer; just turn on the lights or give it the starter test with your size 12's.

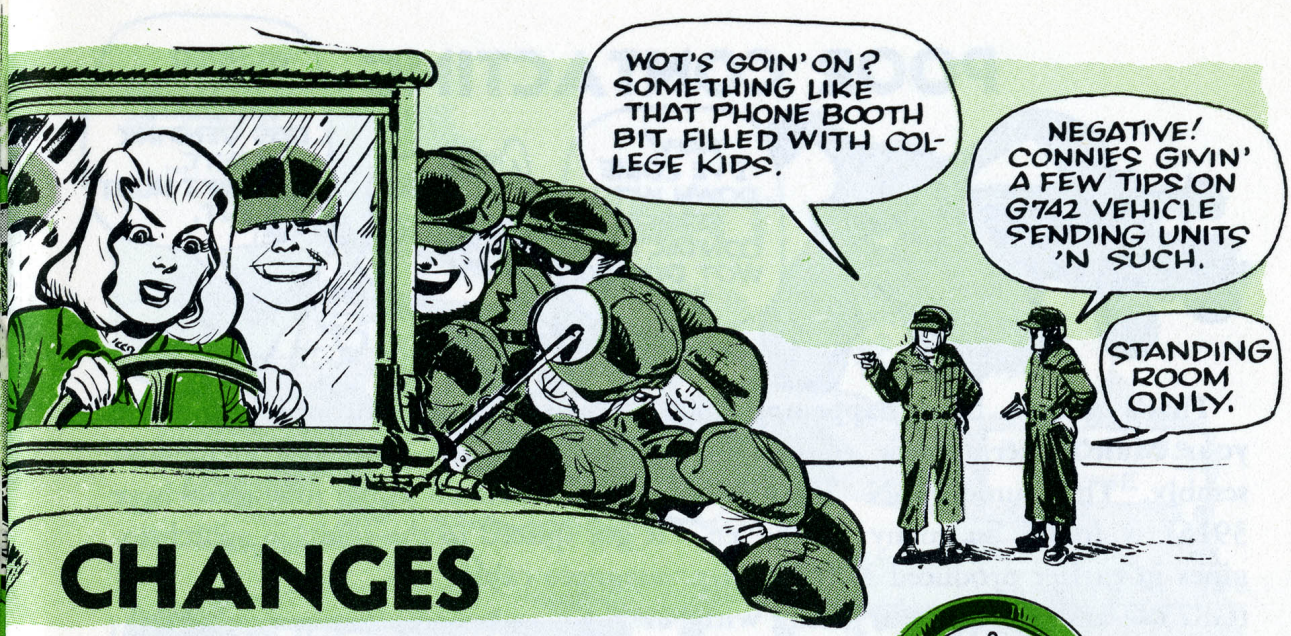
If the battery checks out OK, turn on the ignition switch, and the needle should swing into the yellow. With the motor running at fast idle, the needle should go into the green zone.



If it didn't go to the yellow with the key turned on, the gage is bad. If it didn't go into the green (engine running), check the generator or regulator for defects.

This ought to cut down on the time to take a quick check on these gages.

If you want to make a complete check of your instruments and gages see TB 9-2300-228-20 (8 Jul 60).



CHANGES

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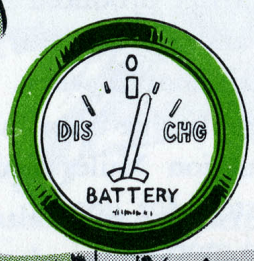

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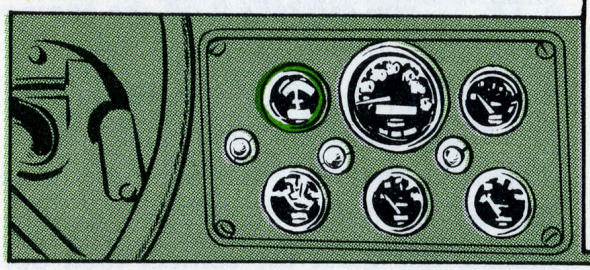

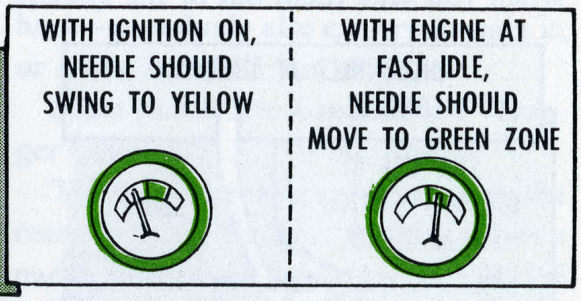

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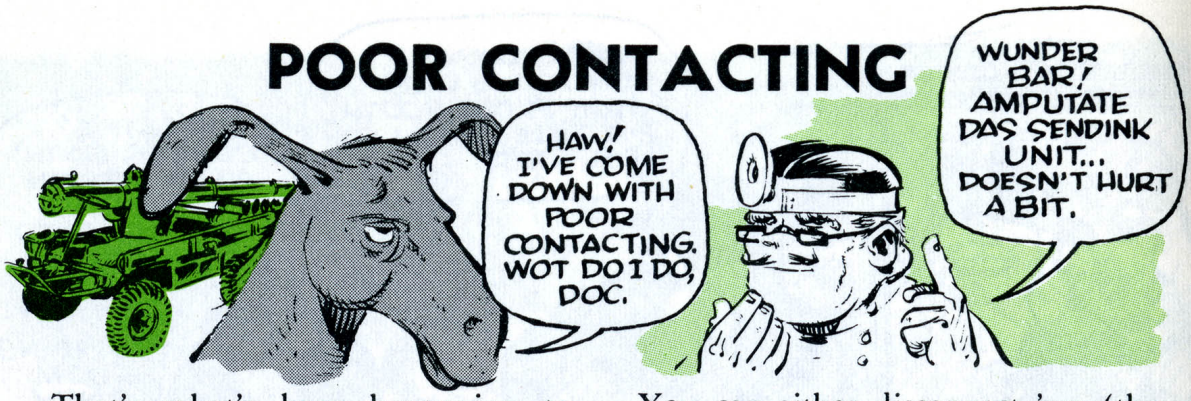
POOR CONTACTING

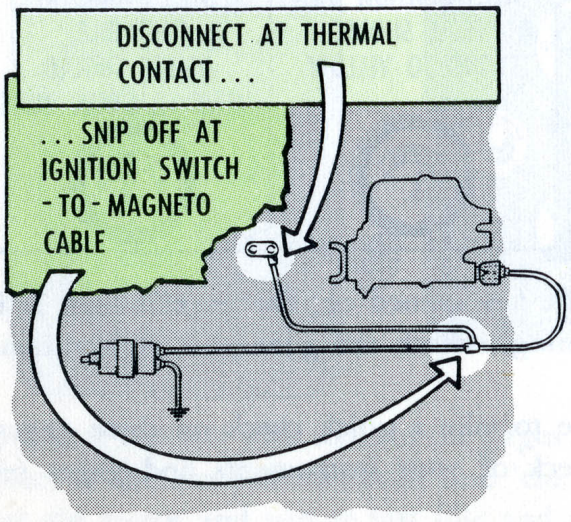


That's what's been happening to your Mule's thermostatic contact assembly. That unit (FSN 2590-697-3915) is found on many of the engines in earlier produced M274 Mules (G823)—and they've been giving with some erratic contact work.

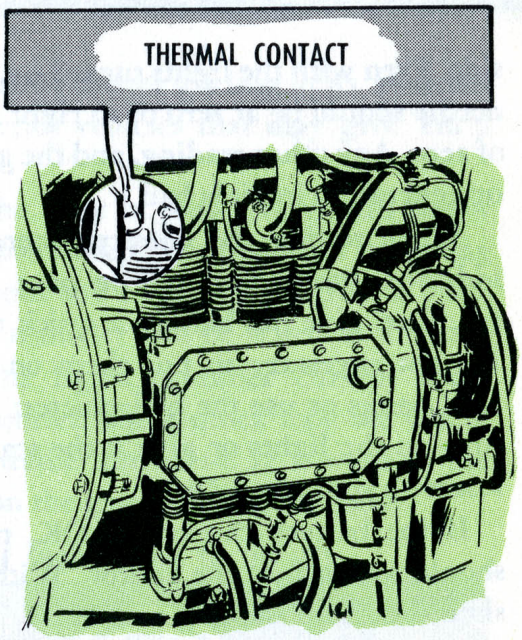
So-o-o-o, they've been taken off the late production Mules and outta the supply system for good . . . you can't get 'em no more.

The unit was supposed to have grounded out the engine only when it got overheated (like with a broken fan belt) but it got to actin' up at times and cuttin' you off when it had no business.

Maybe the contacts on your Mules are working just fine! If so, leave 'em be. When they do start to act up, then's when you take them out of the system.



You can either disconnect 'em (the cable) from the thermal contact and snip the cable off at the junction where it got spliced to the ignition switch-to-magneto cable . . .

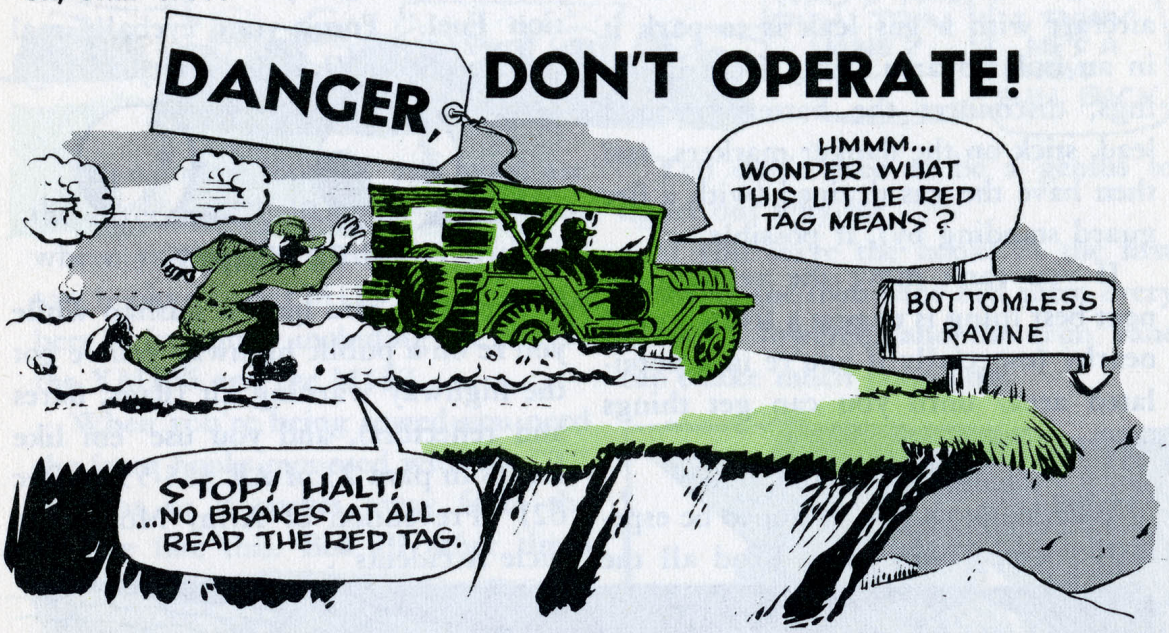


Or . . . you can take it off the engine altogether. If you decide to take 'em off the engine, then you'll be in need of a shorter stud for the cylinder head. The stud that the thermal contact is now mounted to is longer so's to accommodate the space the contact took up.

You need Stud, stepped, (FSN 5307-607-3537) to replace 5305-607-3534.

When the cable gets snipped off be sure to tape up the exposed ignition switch-to-magneto cable . . . that'll be the end of the contact.

FLAG IT . . . TAG IT . . .
OR, STRIP IT . . .



When you have to walk away from an ailing truck, tank, crane, plane or what-have-you, it's wise to mark it well so's anyone else concerned will know **immediately** that the equipment's not safe for operation.

And the easiest and fastest way to give fair warning is with red flags or red rags . . . like it says in para 14e of AR 746-2300-1 (11 Mar 60), "Marking of Vehicles and Equipment".

One or more red banners decorating the outside, and one on the steering wheel, or the ignition switch, or aircraft flight controls, should do the job.

If you forget to post a "Danger" sign and some helpful soul comes along and tries to move it, or fix it, he could do more damage to your rig—and maybe even do harm to himself.

Say your vehicle sprouts a gas or oil leak, its brake, steering, or cooling system fails, or it gets a bad short, or has no lights, or no horn, or some instrument goes on the blink, or maybe it gets a slashed tire . . . before you go off to report the problem, or go looking for a way to repair it . . . you put out the red flags. For aircraft, you use those "Remove Before Flying" red streamers.

If you've got no flags, or red ribbons handy, of course, you can rig up some other valid "Danger—Hands Off" sign.

Same goes for when you're working on a vehicle or aircraft and the whistle blows . . . best fix it, or mark it, somehow—so nobody else can try to start it, or move it, while you're gone.

Some places use a special red "Danger" tag.

The tag has space for noting the reason there's danger, for the driver's name, and other info. One tag is tied firmly to the steering wheel, or the ignition switch, and another is attached to some easy-to-spot location on the outside of the vehicle.

A tag on the ignition switch, or the steering wheel, can help warn—even at night.

P.S MORE

FUEL LEAK

A good way to handle a vehicle or aircraft with a gas leak is to park it in an isolated area, away from buildings, disconnect the battery ground lead, stick on the danger markers, and then have the gas drained (with a fire guard standing by), if possible.

If you can't move the vehicle, the next best thing is to post a lively guard nearby (especially if you're in a populated area) until you can get things under control.

AIRCRAFT SPECIAL

With Aircraft you've got to be especially careful with fuel. Read all the scoop in TM 10-1107 (Feb 60) "Petroleum Handling Operations for Aviation Fuel." Focus your eyeballs real tight on Sect. VI about safety.

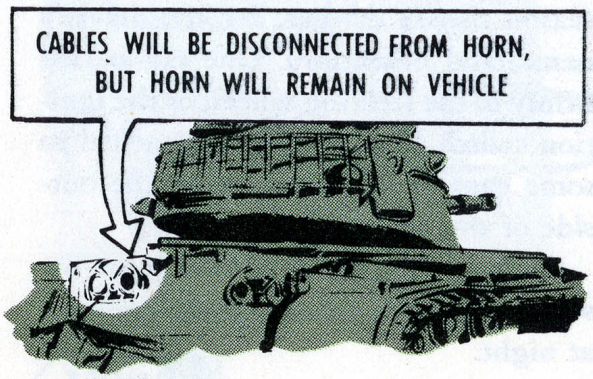
ON THE HIGHWAY

For when you have a mishap while you're on a public highway you've got the highway warning kit (flags, flares and reflectors), and you use 'em like it says in para 23 of AR 385-55 (4 Dec 62) "Prevention of Army Motor Vehicle Accidents".

Hey, Joe, one less maintenance problem—from now on no more horns on your tracked vehicles!

MWO 9-2300-256-20 (16 Jan 64) brings the good word. Your tracked vehicle mechanic disconnects the cables from the horn. He'll pull the horn wiring into the hull interior and cover the wiring end connectors with electrical insulating tape.

He won't take the horn off the vehicle. That'll be done only when the vehicle's rebuilt.



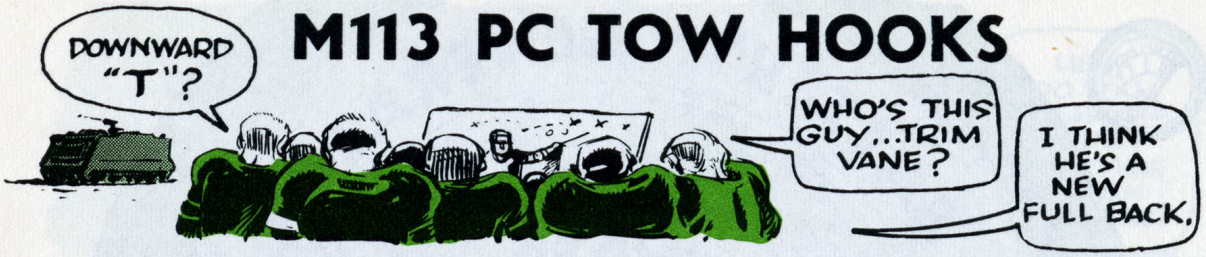
Course, this MWO won't apply to the internal warning horns such as you've got on the M60A1 tanks. The internal horns stay put.

Also, this is not meant to apply to personnel carriers fitted with ramps and some other vehicles. The idea is that vehicles with ramps need a horn to warn when they're going to let the ramp up or down.

The horns are staying on carriers M113, M577, M116, M59, M75, and M76. Likewise for the M84 mortar carrier and the M74, M578, and M88 VTR's. The M107, M110 and M50 SP artillery will also keep their horns.

If your tracked vehicle has a horn and is not in this list, it gets disconnected.

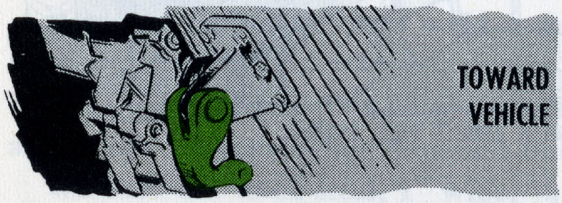
M113 PC TOW HOOKS



If you play football you may use the reverse "T", like this—„L„—but where you **really** need it is with the tow hooks on your M113 PC and members of its family including the M577, the XM106 and the M132.

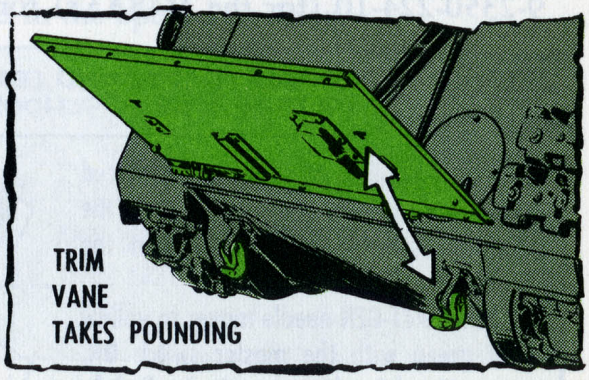
When you're being towed you need the front hooks mounted with the "T" upright so it curves away from the vehicle like this. But all other times

mount the hooks reversed (like so—„L„—) with the heads pointed in, toward the vehicle, like this.



You don't need to be a genius to figure out why-for.

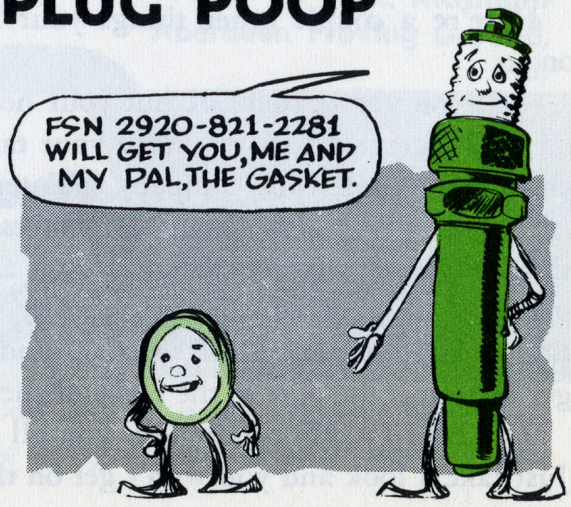
If you leave the hooks in the first position, the trim vane hits them every time it's lowered, and the trim vane can't take much pounding.

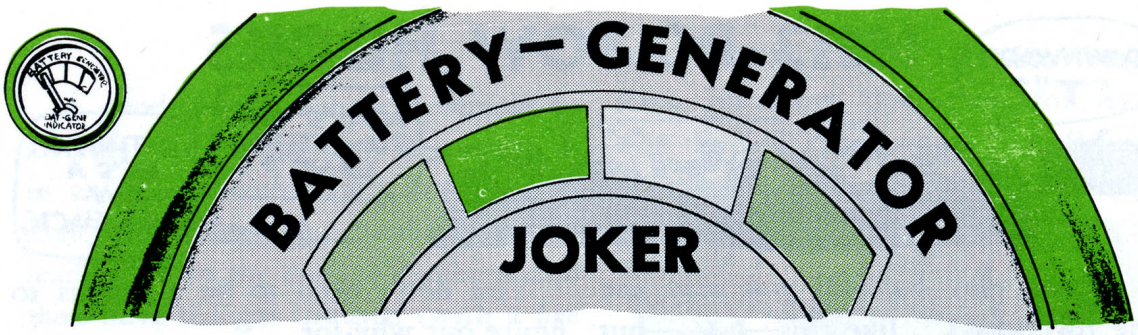


So use the reverse „L„ formation with the hooks except when you're being towed. Give your trim vane a break this way and you won't break it. Also, to keep your trim vane healthy, put it into the fording position easy-like. Drop it hard and you beat up the hinges.

MORE M113 PLUG POOP

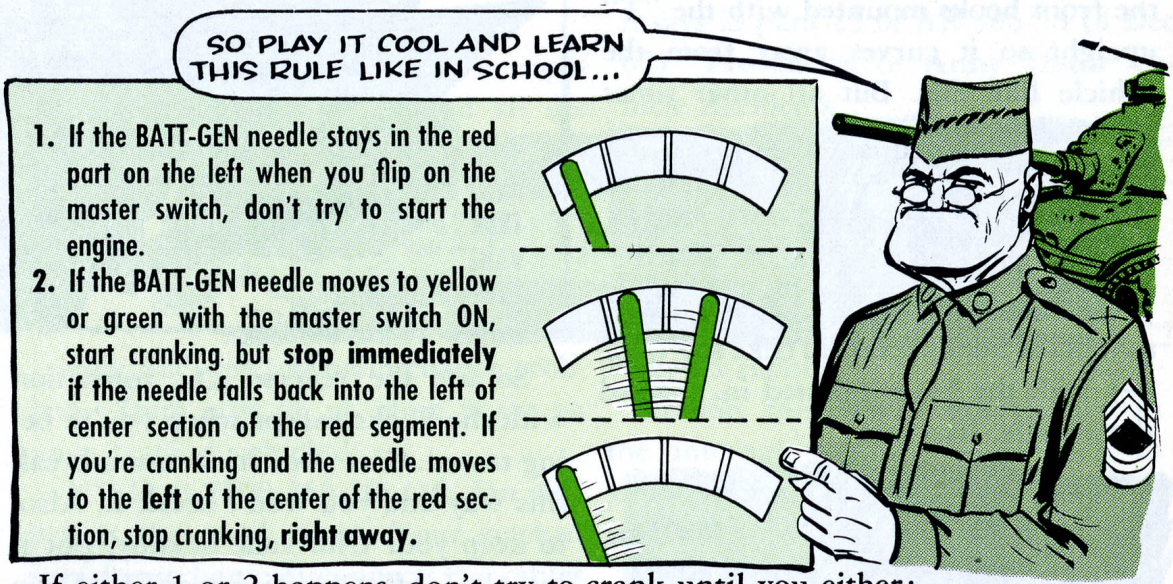
In PS 134 (page 4) we had FSN 2920-679-9728 as the stock number for the spark plugs in your M113 personnel carrier and FSN 2920-314-1130 for the gaskets you need, one for each plug. Once this info was as right as rain falling gently on the plain in Spain. Now **one** FSN will do the work of two. Ask for FSN 2920-821-2281 which will get you the same spark plug and also the gasket. Progress, it's wonderful!





The BATT-GEN indicator on your M60, M60A1 and M48A3 tanks will save you lots of grief if you know how it works.

On 'tuther hand, if you **don't** know what the indicator indicates you can ruin your starter and relay. See your TM 9-2350-215-10 (for the M60's) or TM 9-2350-224-10 (for the M48A3's) for the right way to start these vehicles.



If either 1 or 2 happens, don't try to crank until you either:

Get another tank to slave you, or—

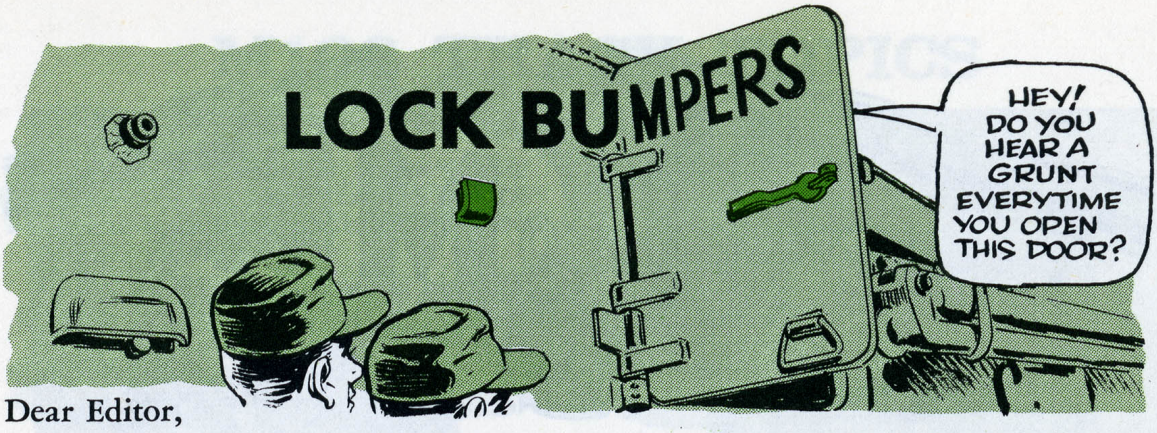
Get your batteries recharged.

Here're a couple other things your BATT-GEN indicator will tip you off on . . .

—If you get started OK but your needle stays in the yellow and won't move on to the green when you have your tank at a fast idle, your generator's not charging, so tell your company maintenance.

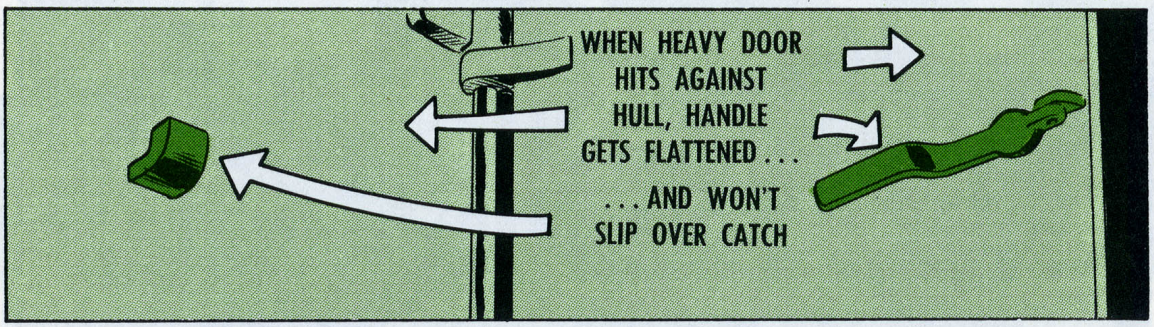
—If, at a high idle, the needle moves into the last section at the extreme right, shut OFF your master switch at once and tell your company maintenance. It means your generator is dangerously overcharging. (This extreme right section is red on some BATT-GEN's and green on others. If it is green, the danger section is the part to the **right** of the white dot.)

The BATT-GEN needle tells you all you need to know to keep out of trouble. Just take a look and you won't get on the hook.



Dear Editor,

If the personnel doors on the M88 recovery vehicle fall back hard against the latch lug on the hull (when they're opened), the outside door-lock handles get caught in the middle and bent out of shape. Then they won't slip over the lug to keep the heavy doors safely locked in the opened position.



Since an unlocked, open door, is a serious safety hazard, the handles are always having to be removed and re-shaped.

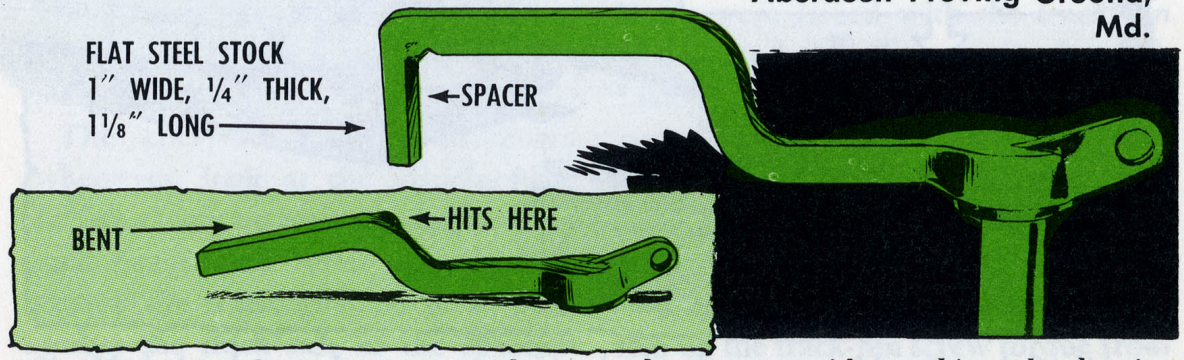
Our minor fix will protect the handles, and save maintenance work:

Remove the handles and weld a short bumper (spacer-like) on the inside of the handle's free end where it misses the lug.

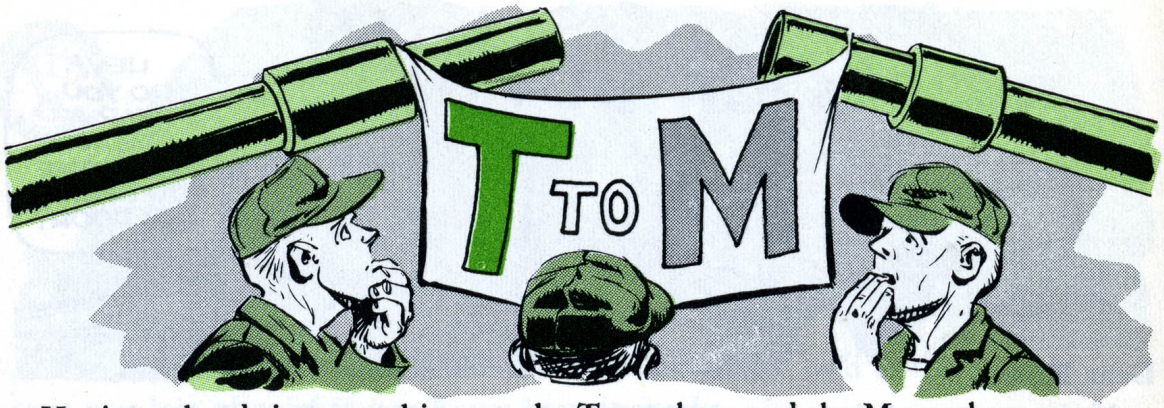
Then if the doors ram back into the vehicle the bumper braces the handle and keeps it from being flattened out.

We used flat stock steel, 1″ wide, ¼″ thick, and 1⅛″ long.

R. McKnight
Aberdeen Proving Ground, Md.



(Ed Note—Good protection. And, a good way to avoid smashing the door's lock-handles is to hold the handles in the upright position until you're ready to latch or tighten the handle.)



Having a hard time matching up the T numbers and the M numbers on some of the latest big shootin' irons? Well, stand easy. This little guide racks up the facts:

M107 SP 175-mm gun (T235E1)
. . . TM 9-2300-216-(series)

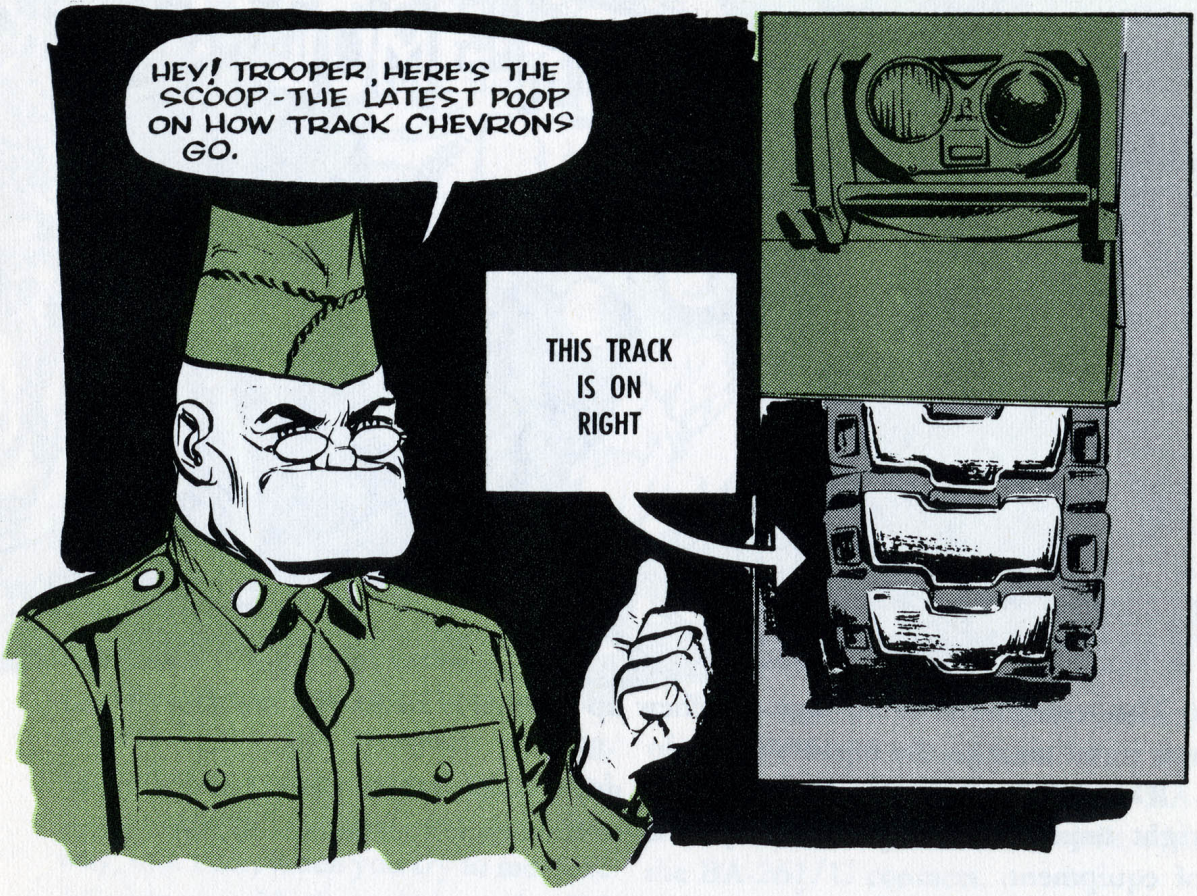
M108 SP 105-mm howitzer (T195E1)
. . . TM 9-2350-217-(series)

M109 SP 155-mm howitzer (T196E1)
. . . TM 9-2350-217-(series)

M110 SP 8-in howitzer (T236E1)
. . . TM 9-2300-216-(series)

All of these loud-boomers are standard items now so they go by their M numbers. Some of the TM's and DA Pam 310-4 (pubs index) still give the T numbers, though, so you have to know both.

M108 TRACK TOPICS



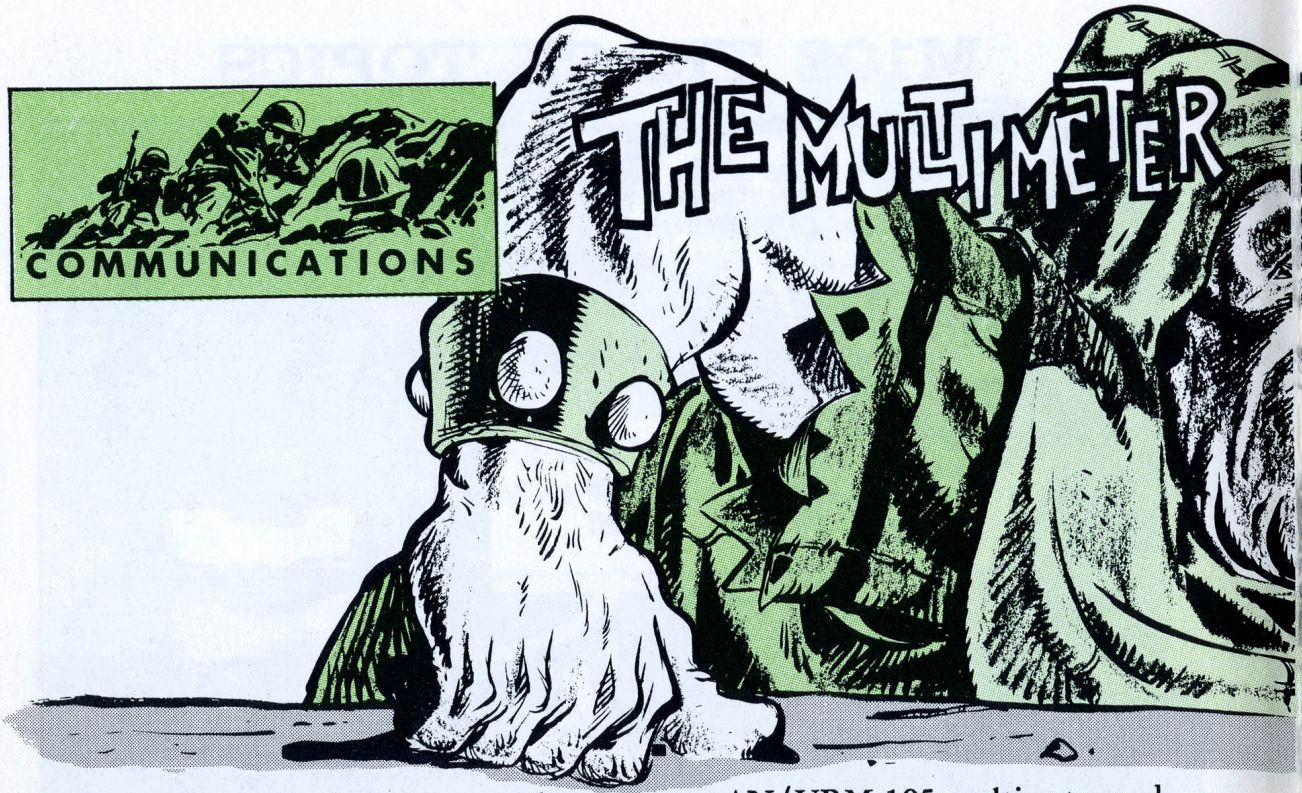
In all of the TM 9-2350-217-series pictures, the track on your M108 and M109 SP howitzers looks like it's on wrong because the chevrons point up instead of down when you look at the vehicle from the front end.

Well, if it's on the way it shows in the TM's it is wrong and needs to be changed.

The chevrons must point down (when you look at the vehicle from the front) for two reasons—because the track cleans itself better that way and because the track sprocket teeth push against the thick side of the sprocket tooth socket. If you had it reversed, so the sprocket teeth made contact with the thin side, the socket would naturally wear out quicker.

So-o-o-o, if your track is on wrong, reverse it. M108 vehicles with serial numbers 147 and lower, and M109 vehicles with serial numbers 85 and lower were issued with the tracks on wrong, and they have to be changed. Likewise, some tracks that were on right were changed so they'd look like the pictures in the TM's and they also have to be put on the other way. Watch for it in the very latest revised TM's.

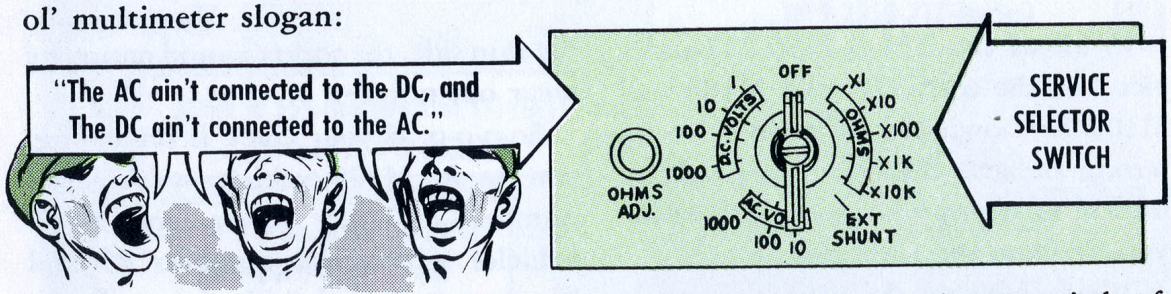
By the way, when you change 'em step up the track-pin screw torque from 100 ± 15 lbs-ft to 175 ± lbs-ft ± 15, on account of they hold better.



The wrong kind of voltage can chew up your AN/URM-105 multimeter and spit it out clear to the repair shop.

That kinda menu may be tasty to the guy who makes the parts, but it's downright unpalatable to you when you have to use the multimeter to test a piece of equipment.

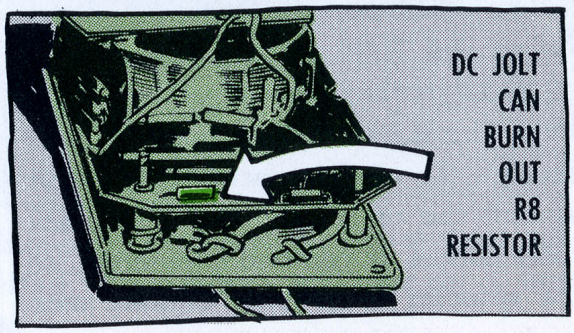
But don't despair, O'Hare. You can beat the situation by digesting this little ol' multimeter slogan:

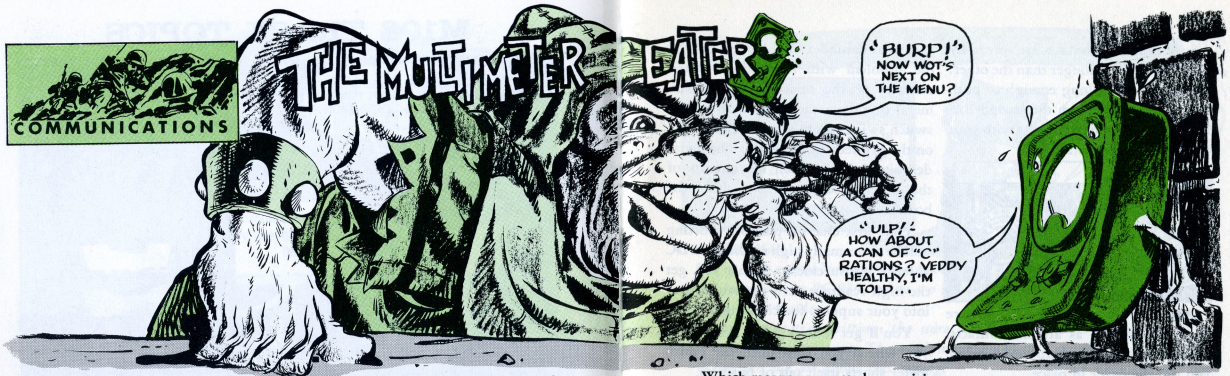


Which means: You can't measure DC voltage with the S1 selector switch of the multimeter set for AC voltage measurement . . . and vice versa.

So-o-o, check your switch setting first, and then measure the voltage.

Chewing up the AC circuitry with a DC jolt kinda fries the R8 resistor. With the R8 gone, the AC meter ranges are shot, and, presto! no meter reading. This could lead you to doing the normal thing to get a reading—like going down the scale. All that helps to do, sadly, is to burn out the meter.





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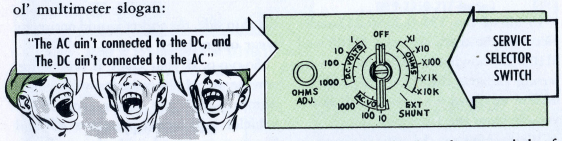

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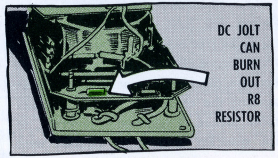
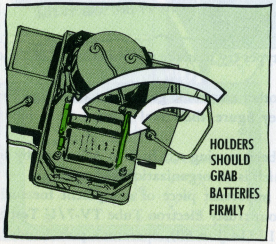


Which means you gotta be suspicious soonest if you get no meter reading. Eyeball that switch setting quick-like!

The switch gnaws at you the other way, too. Like, when you try to measure AC voltage with the switch set for DC readings.

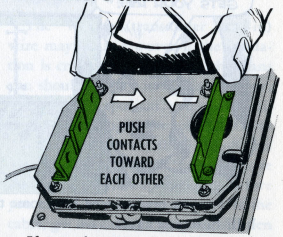
You may get off without damage one or two times, but you can burn out the R1 resistor or the meter movement by reaching for AC with a DC setting.

Now for a blink in another direction.



The battery holders (clamp contacts) of the URM-105 often spread after use.

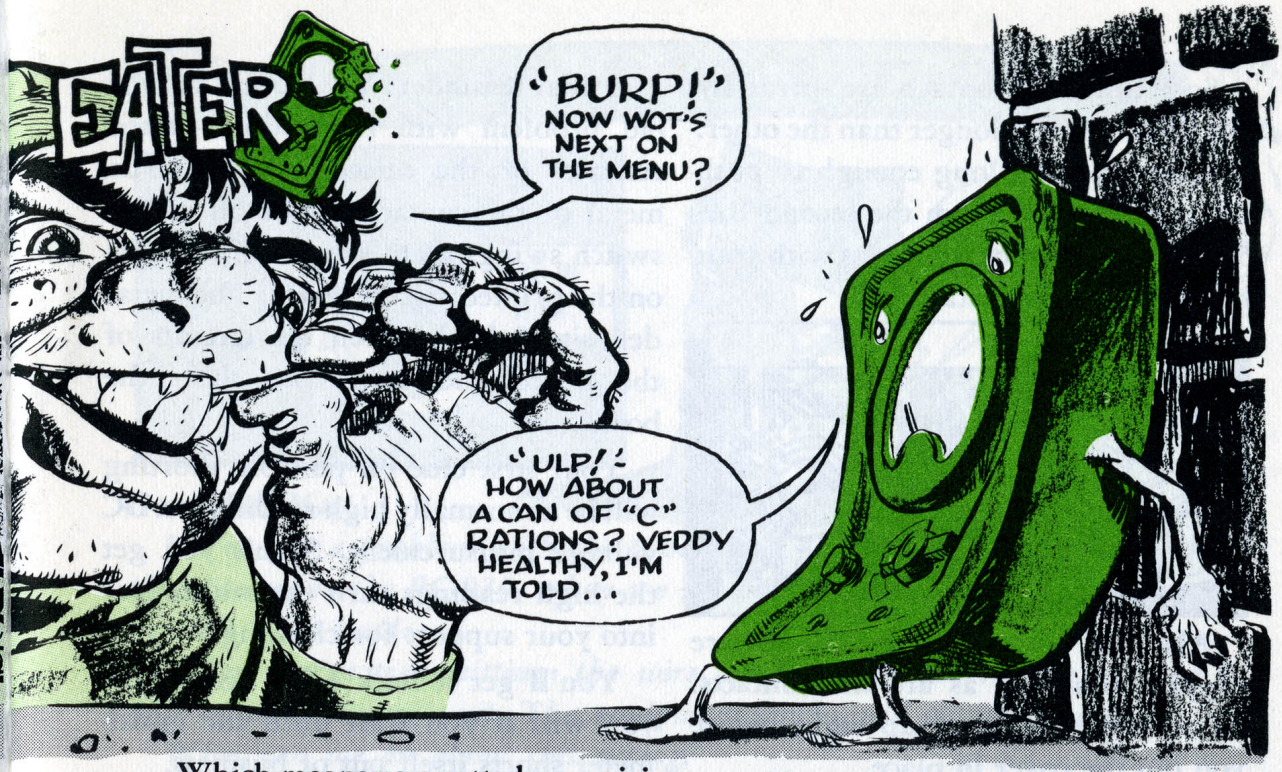
This happens mostly with the BA-58/U contacts and once in a while with the BA-261/U contacts.



If your batteries don't have a snug fit, remove them. Then, push the contacts toward each other—easy-like, because it only takes slight pressure to do the job.

Stop when you've got enough gripping strength in the contacts to hold the batteries in place.

MORE



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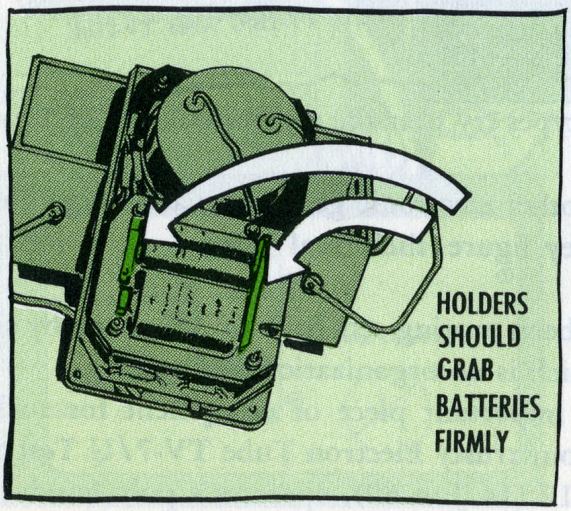

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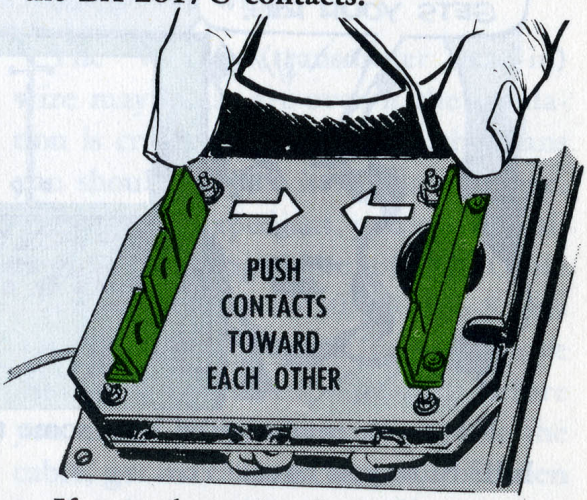

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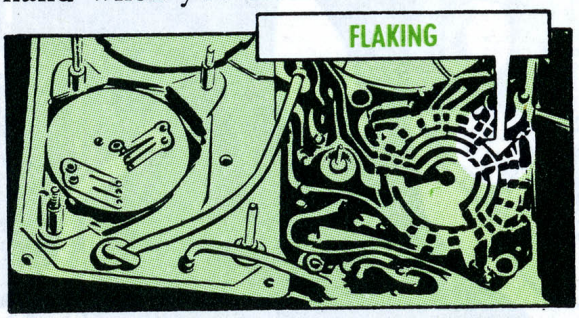
PS MORE

Sometimes the contacts are spread by one battery being longer than the other. One may be just long enough to push the contact away from the second BA-58. So-o-o, test their snugness with your hand when you install 'em.



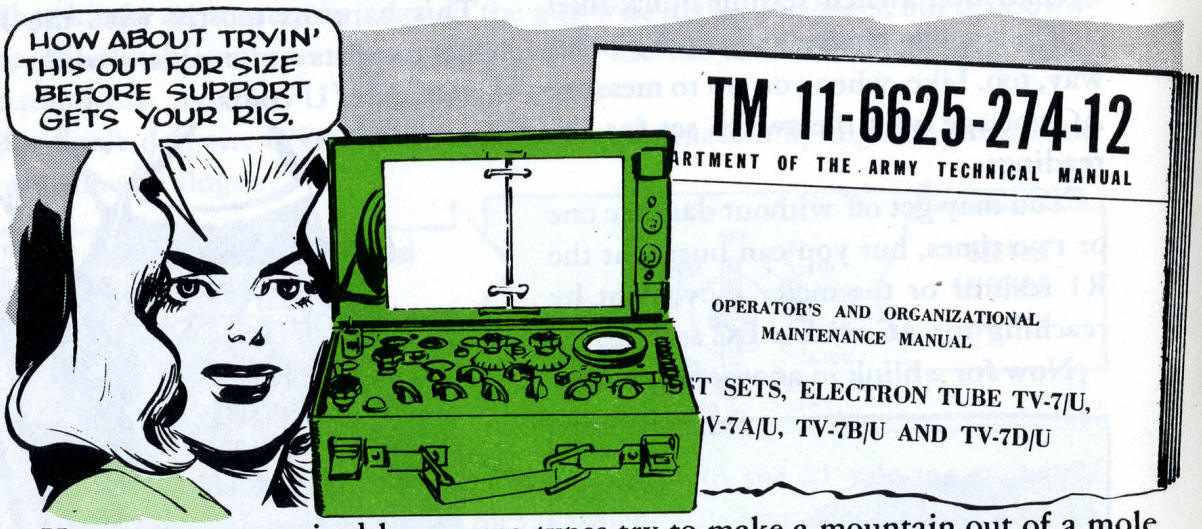
Also, the bottoms of the BA-58s are slightly rounded, as are the contacts. Be sure they're lined up right before you put the cover in place.

A final reminder: You've still got the old problem with the iridium-plated contacts of the selector switch. The metal of the contacts wears off as the switch swings them around the circuits on the printed circuit board. The metal deposits flake between the circuits of the board and eventually short the board.

Your first clue on possible shorting will be abnormally high readings on DC voltage measurement. Soon's you get the high readings turn the multimeter into your support for cleaning.

You'll get it back a lot faster than you will if you wait until the multimeter shorts itself out of business.

CHECKED YOUR TUBES?



Have you ever noticed how some types try to make a mountain out of a mole hill? Sure you have!

A radio receiver, transmitter, or other electronic gear starts actin' up. Then, without giving 'er the once-over, they figure she's real gone . . . a job for support.

That's why support, of late, has been putting sets back in A-1 shape by simply replacing a bum tube or two, which is an organizational chore.

'Course you wouldn't sideline an important piece of equipment for such a minor repair. Not while you have your trusty Electron Tube TV-7/U Test Set, and a copy of the TM 11-6625-274-12 (14 Jun 60), operator's pub, handy.

AN/GRC-26D ARC-OVER

Dear Half-Mast,

We've got a problem with the transmitter lead-in wire, from the base of the antenna to the BC-939, when we use our AN/GRC-26D radio set on voice in the 1.5-3.0 band.

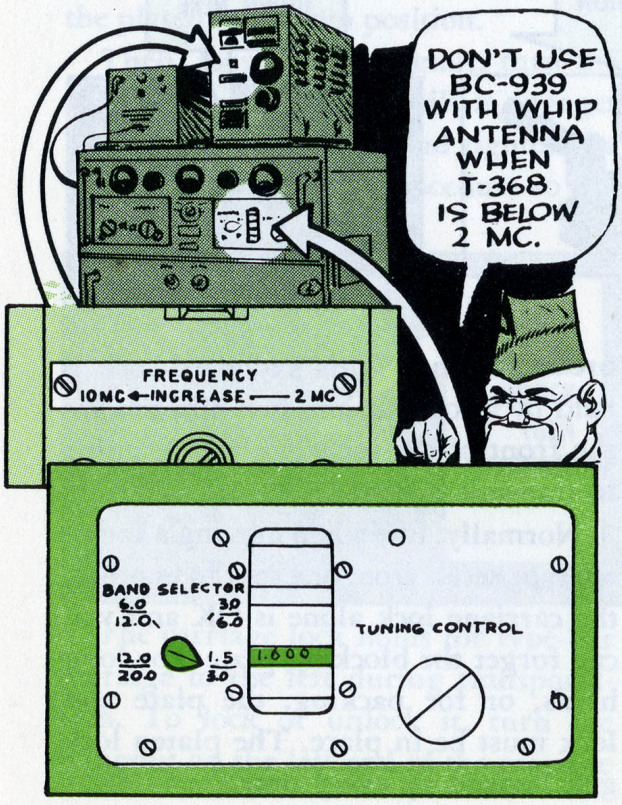
When you're transmitting, the wire arcs between the shelter and the BC-939 antenna tuning unit. The equipment works well on other bands.

What can we do about this arcing?

SP 4 J. A. R.

Dear Specialist J. A. R.,

You didn't say so, but I assume you have the trouble when you use the whip antenna. It sounds like it, from what you describe. A-n-d, the BC-939 should not be used below 2.0 megacycles when you use the whip.

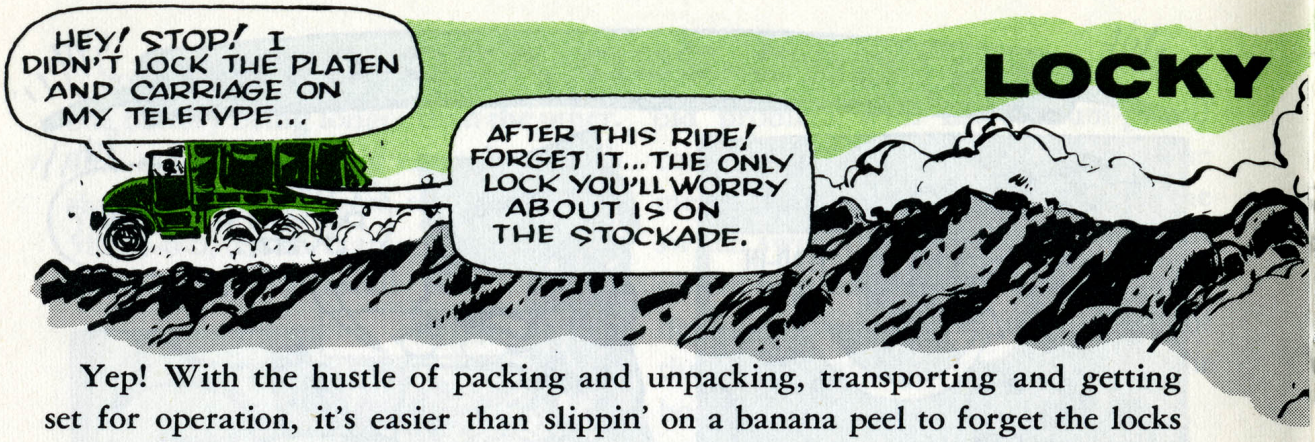


The W-128 (transmitter lead-in) wire may cause arc-over if the insulation is cracked or worn. Which means you should replace it with a new one.

As a field expedient, you can substitute a foot-long piece of RF Cable RG-8, FSN 6145-161-0887. RG-8 gets good results, but you gotta remove the outer cover and shielding before you use it. Also, when you replace the cable, get maximum clearance between it and the conduit and junction box on the shelter wall.

As a final precaution, your output power should not exceed 400 watts on the low frequency band . . . since that's when you've got a high standing wave ratio present.

Half-Mast



Yep! With the hustle of packing and unpacking, transporting and getting set for operation, it's easier than slippin' on a banana peel to forget the locks on a coupla' your teletypewriter sets.

But never do it! Big damage can greet you on the other end of the ride.

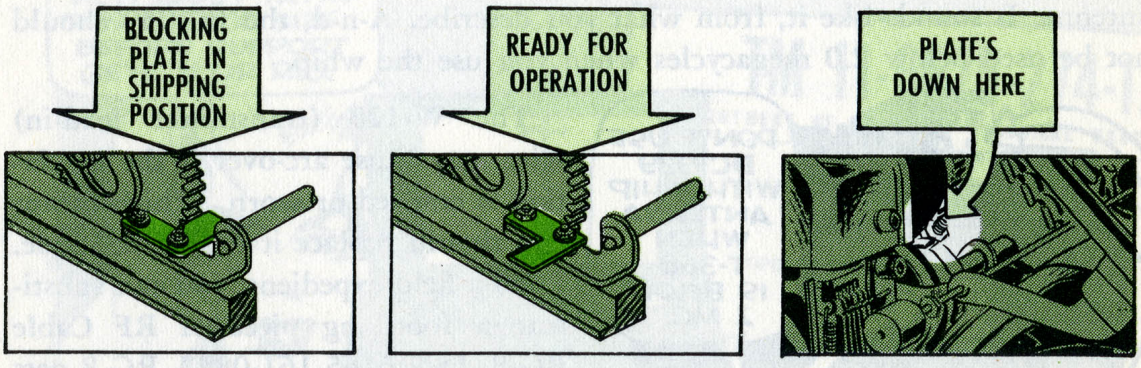
Like, you can slay-ride your TT-98()/FG or TT-4()/TG teletypewriter clear onto the maintenance shop heap if you forget its platen and carriage locks and blocking plates.

On the TT-4, the blocking plate is your baby to worry about.

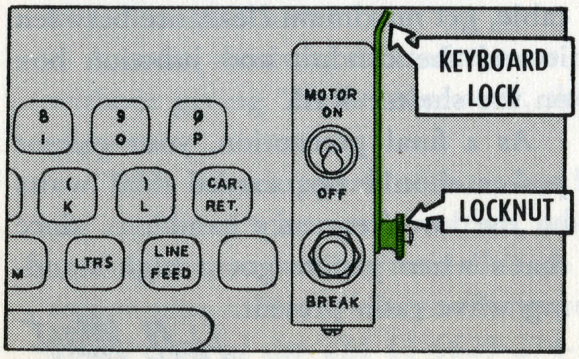
But your direct support has to position the plate on the TT-98.

The plate blocks the carriage-return driving gear when it's in position.

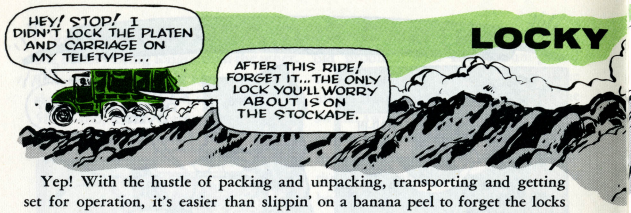
A quick look will tell you whether it's ready for business or shipment. Just take a peek down that hole between the carriage and the platen.



The TT-4's got an additional lock—attached on the right of the motor and break switches. This keyboard lock is held by a locknut and gets slid toward the front of the set when you're going to transmit.



Normally, like when moving a radio-teletype setup from one spot to another, the carriage lock alone is OK and you can forget the blocking plate. For long hauls, or for packing, the plate and lock must be in place. The platen lock gets hooked up every time.



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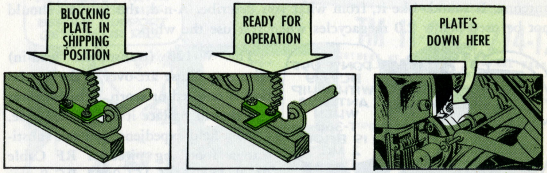

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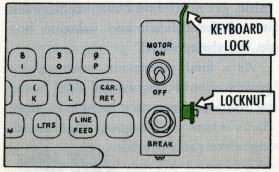

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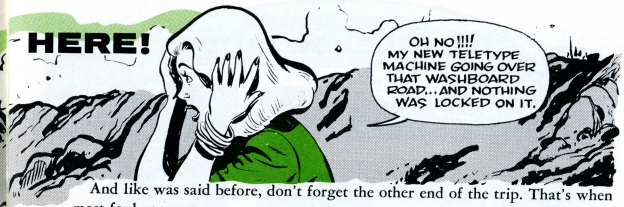
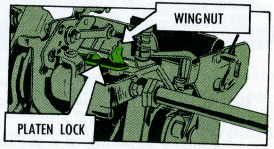
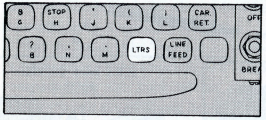


And like was said before, don't forget the other end of the trip. That's when most foul-ups occur.

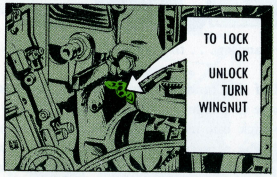
It's as important to get those locks off as to put 'em on.

The platen gets damaged from flipping up and down during transportation, and its lock holds it down. The lock is on the right end of the platen—held in place by a wingnut. You line it up by striking the letters key to set the platen in a down position.

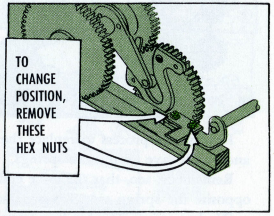




Then, loosen the wingnut, turn the locking lever clockwise till it engages the stud on the platen, and tighten the wingnut. Reverse the procedure to unlock it.



The carriage lock holds the type-bar carriage to the left during transportation. To lock or unlock it, turn the wingnut on the left end of the carriage rail, swing the locking lever up or down from the stud, and tighten the wingnut. First, tho, strike the carriage return so's the carriage is in position at the far left.



Disengaging the blocking plate on the TT-4 is as easy as taking off the two selflocking hexagonal nuts, flipping the plate over and away from the driving gear, and refastening it with the two nuts.

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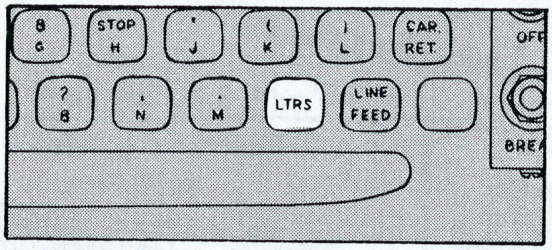

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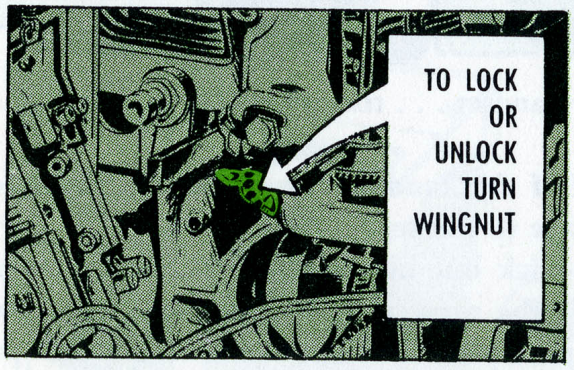

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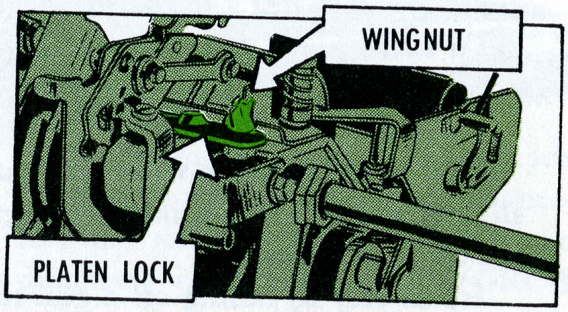

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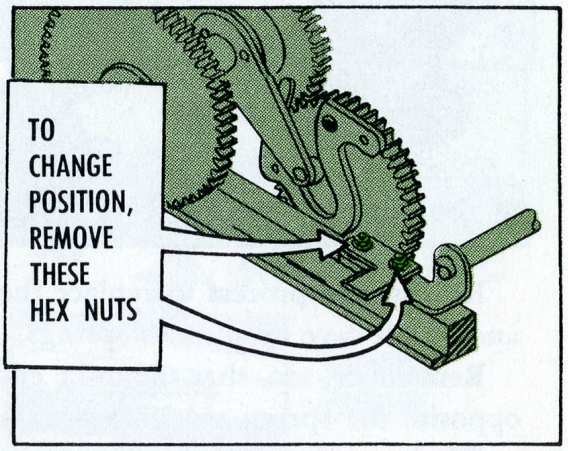

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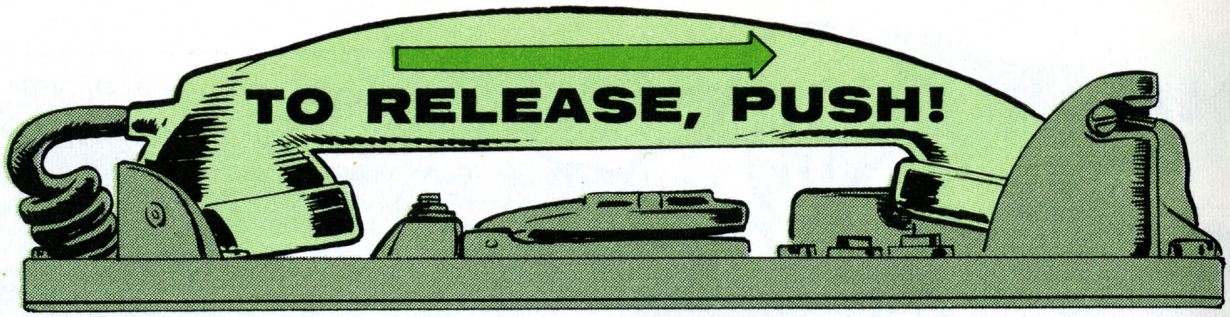


So push.

It only takes a little one to unmarry the H-60 handset from its cradle on the TA-43/PT and TA-312/PT telephone sets.

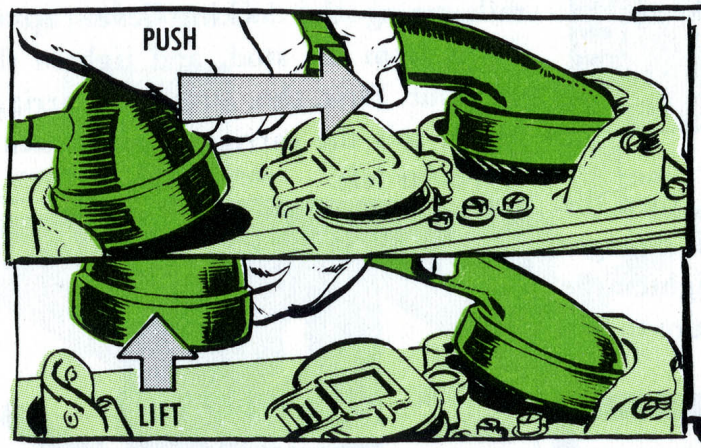
Some Joes found it out the hard way. Like, they saved a tenth of a second with a straight-up pull, but they sprung the handset retaining spring on the receiver cradle. So they lost a lot more time carting the set off for repair and waiting to get it back.

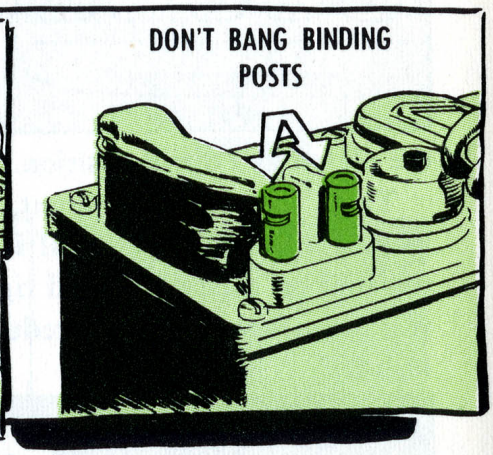
So wot to do?

. . . Push!

Like, wrap that lily-white dishpan hand over the handset; push said handset slightly toward the retaining spring; raise the mike end (where the cord is), and out comes the handset.

It's as easy as falling off a gun tube.





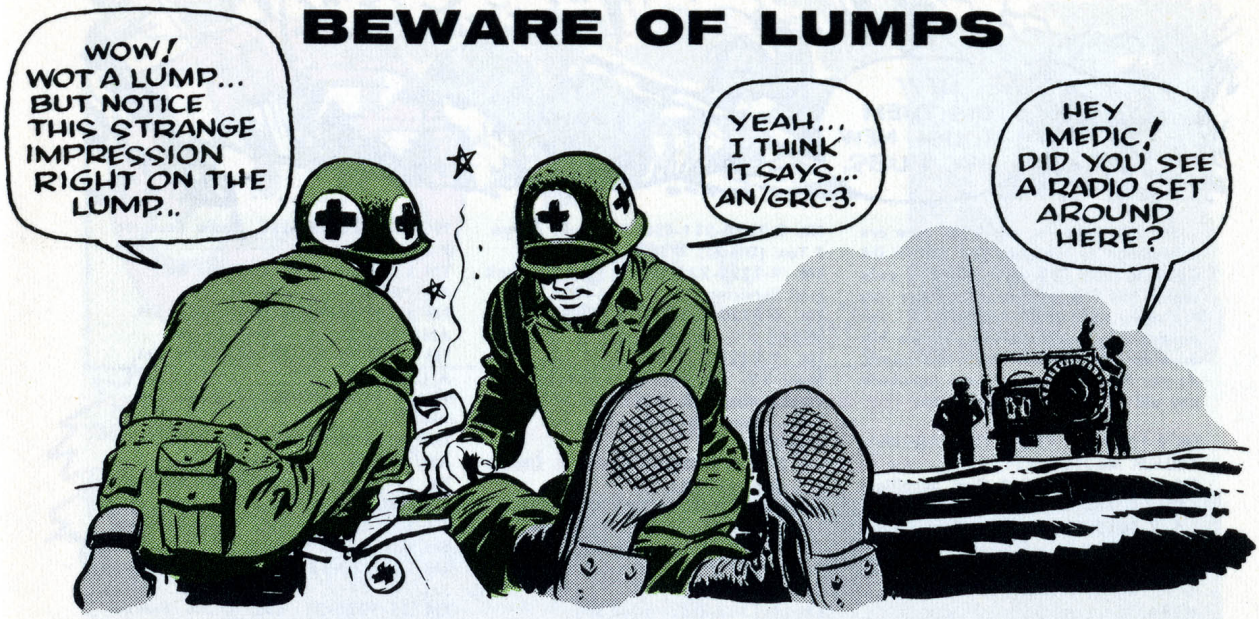
Reverse the process to replace the handset . . . tilt, push and let it down . . . and you'll save even more springs.

Remember, too, that the mike end of the handset always goes in the cradle opposite the spring side. Saves damage to the cord.

'Nother point: The binding posts stick out unprotected-like on the cover's outside edge. It's up to you to supply the protection. Which means you gotta watch it so nothing bangs into the posts and vice versa. A watchful eye pays off by keeping the set out of the repair shop.

A final note: Replacement covers for the TA-43 and TA-312 come without the metal guides for the retaining springs. Which means if they can't be recovered from the old covers, they'll have to be fabricated.

BEWARE OF LUMPS

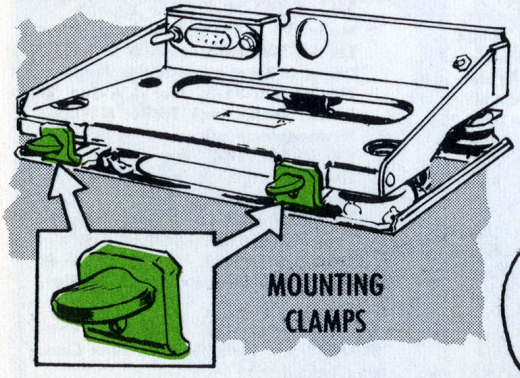


Lumps, and worse, can come real easy for the Joe who forgets to lock his radio set components in place when he mounts 'em in a vehicle.

Fact is, more than one Joe is walking around with the imprints of a radio component in the back of his skull. And some are not walking around.

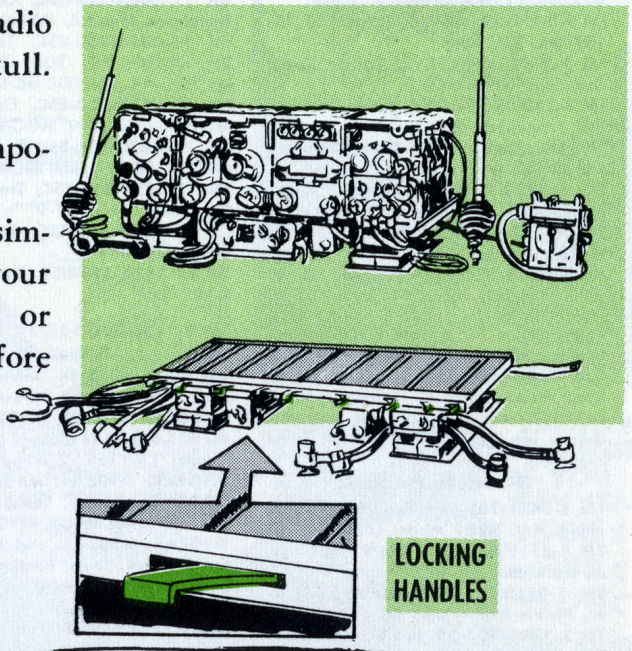
All it takes is a free-riding component and a fast-stopping vehicle.

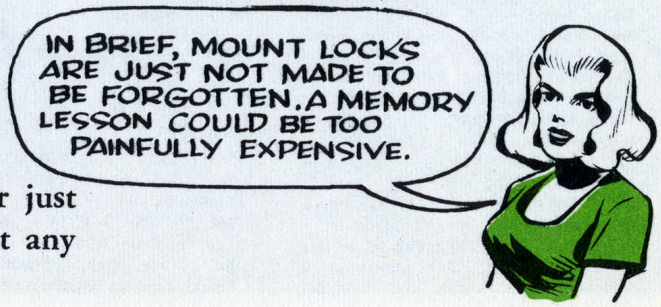
To avoid that sticky mess, the simplest thing to do is make sure your mount locking levers, or clamps, or whatever, are snugged up tight before you even start your vehicle.



. . . And that caution goes for just about any radio set in just about any vehicle.

Loose components also can tear each other up and mangle cables, connectors and receptacles . . . especially the dumbbell cables of the AN/GRC-3 series radio set configurations.





The ESC TM's you see listed here are in addition to the ones you saw in DA Circular 750-1 (12 Mar 64.) The pubs center has sent out these in letter lists to your publications officer; if you haven't heard about these yet, see him or order the number your unit needs. As you know, these new ones supersede any old ones on your equipment.

TM 9-1000-209-ESC/1, Gun, Recoilless 120MM M63E2 (M28)
TM 9-1000-209-ESC/2, Gun, Recoilless 155MM M64E2 (M29)
TM 9-1015-203-ESC, Howitzer, Light Towed, 105MM, M101 and M101A1
TM 9-1025-200-ESC/1, Howitzer, Medium Towed, 155MM, M114 and M114A1
TM 9-1030-203-ESC, Howitzer, Heavy Towed, 8 Inch M115
TM 9-1055-212-ESC/1, Launcher, Rocket 318MM M34
TM 9-1055-212-ESC/2, Cart 318MM Rocket Trans M14
TM 9-1055-212-ESC/3, Handling Unit 318MM, Rocket M572
TM 9-1055-215-ESC, Launcher, Rocket Multiple 115MM M91
TM 9-2300-224-ESC/2, Mortar, SP, FT; 107MM, XM106
TM 9-2300-224-ESC/3, Carrier Comd Post, Light Track M577
TM 9-2300-224-ESC/4, Flame Thrower, Self Propelled, M132
TM 9-2320-204-ESC, Tank, Recovery Vehicle, Heavy M51
TM 9-2320-205-ESC, Carrier, Cargo, Amphibious FT M116
TM 9-2320-210-ESC/6, Truck Tank, Water, 2½ Ton, M222
TM 9-2320-211-ESC/6, Truck, Tractor 5 Ton (Diesel) M52A1
TM 9-2320-211-ESC/7, Truck, Cargo, 5 Ton (Diesel) M54A1
TM 9-2320-235-ESC/2, Truck, Tank Fuel Servicing 2½ Ton M49CA1
TM 9-2320-235-ESC/3, Truck, Tank, Water, 2½ Ton M50A1
TM 9-2320-235-ESC/4, Truck, Van, Shop 2½ Ton M109A2; Repair Shop, Truck, Mounted 2½ Ton M185A2; Truck, Van, Expansible 2½ Ton M292A1
TM 9-2320-235-ESC/5, Truck, Tractor 2½ Ton M275A1
TM 11-226-ESC, Radio Set, AN/TRC-34
TM 11-615-ESC, Radio Set, AN/TRC-20
TM 11-621-ESC, Radio Set, AN/GRC-41
TM 11-806-ESC, Radio Control Group OA-1754/GRC
TM 11-1303-ESC, Radar Set, AN/MPQ-10
TM 11-2225-ESC, Teletypewriter Set, AN/GGC-3
TM 11-5805-250-ESC, Telegraph Terminal, AN/TCC-4 & AN/TCC-20
TM 11-5805-285-ESC, Terminal, Telegraph-Telephone AN/MCC-6
TM 11-5805-286-ESC, Repeater, Teletypewriter, AN/MCC-3
TM 11-5805-288-ESC, Central Office Telephone Manual, MTC-9
TM 11-5815-200-ESC, Teletypewriter Set, AN/FGC-20, -20X, -21X; AN/FGC-64, AN/FGC-66 & AN/UGC-4
TM 11-5815-210-ESC, Central Office Teletypewriter, AN/MGC-9
TM 11-5820-222-ESC/2, Radio Sets, AN/TRC-68 and AN/TRC-68A
TM 11-5820-352-ESC, Transmitting Set, Radio, AN/MRT-9
TM 11-5820-353-ESC, Receiving Set, Radio AN/MRR-8
TM 11-5820-334-ESC, Radio Receiver, R-392/URR
TM 11-5820-357-ESC, Radio Receiver, R-390/URR
TM 11-5820-398-ESC, Radio Set, AN/PRC-25
TM 11-5820-401-ESC/3, Radio Set, AN/VRC-43
TM 11-5820-401-ESC/4, Radio Set, AN/VRC-47
TM 11-5820-401-ESC/5, Radio Set, AN/VRC-49
TM 11-5820-453-ESC, Radio Set, AN/GRC-34 & AN/GRC-87
TM 11-5820-498-ESC, Radio Set, AN/GRC-125
TM 11-5820-505-ESC, Radio Terminal Set, AN/MRC-68A
TM 11-5820-531-ESC, Radio Set, AN/VRC-54
TM 11-5825-211-ESC, Radio Beacon Set, AN/GRN-11
TM 11-5840-281-ESC, Radar Set, AN/TPN-8
TM 11-5895-221-ESC, Radio Terminal Set, AN/MRC-73
TM 11-5895-222-ESC, Teletypewriter, Operator Central, AN/MGC-19
TM 11-5895-223-ESC, Operator, Central Communications, AN/MSC-31
TM 11-5895-224-ESC, Operator, Central, AN/MSC-32
TM 11-5895-227-ESC, Operator, Center Communications, AN/MSC-25
TM 11-5895-229-ESC, Central Communications, AN/VRC-30
TM 11-6130-210-ESC, Charger Battery, PP-2102/U, PP-2103/U; Charger Battery, PP-775/U, PP-775A/U
TM 55-1930-203-ESC, Lighter, Amphibious, Resupply Cargo (BARC)
TM 55-1930-205-ESC, Lighter, Amphibious, Resupply Cargo (LARC V)

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 5-3431-205-20P, Feb Welding Machine, ARC Libby Model LE300
TM 5-3810-201-20P, Jan Crane-Shovel, Harnischfeger 855 BG2
TM 5-3810-206-20P, Jan Cran-Shovel, Harnischfeger 855 BG
TM 5-3895-207-20, Feb Roller, Galion Roll-o-Matic
TM 5-3895-263-15, Mar Roller, Motorized: Huber-Warco Model E1012m
TM 5-4110-203-15, Feb Refrigeration Unit, Dunham-Bush Model PTG-9
TM 5-4310-206-20P, Feb Compressor Ingersoll-Rand DR 315GYROFLO
TM 5-6115-343-25P, Jan Generator, MS Model HF 0.5 MD
TM 9-1410-250-12P/1/1, Feb Nike-Herc, Nike-Herc (Imp)
TM 9-1410-250-12P/2, Feb Nike-Herc, Nike-Herc (Imp), Ms1 Operation & Maint
TM 9-1430-250-12P/10/1, Mar Nike-Herc, (Imp), Ground Con Equip
TM 9-2330-213-14, Jan Chassis Trailer; 1½ Ton, 2-Wheel M103A1, M103A2, M103A3, M103A3C, M103A4, and M103A4C Trailer, Cargo; 1½ Ton, 2-Wheel M104, M104A1, M105A1, M105A2, and M105A2C; Trailer, Tank, Water: 1½ Ton, 2-Wheel M106, M106A1, M107A1, M107A2, and M107A2C; Trailer, Van, Shop; Folding Sides, 1½ Ton, 2-Wheel, M448
TM 10-1670-221-23, Mar Parachute, Cargo Extraction 28-Foot
TM 10-3930-225-20, Feb (Prorated) Truck, Lift, Fork, (Clark Model CY 150 B, Army Model MHE 175)

RIGGING:

TM 10-500-10-1, Mar M38A1, ¼-Ton Truck on 11-Ft and 6,000 Pd Platforms
TM 10-500-11-1, Mar M37, ¾-Ton Truck on 15-Foot Platform
TM 10-500-11-3, Feb M37, ¾-Ton Truck, Modular Platform
TM 10-500-13-1, Mar M101, ¾-Ton Trailer on 11-Ft Platform
TM 10-500-20-3, Mar M34, M35 or M35A1, 2½-Ton Truck Modular Platform
TM 10-500-28-2, Mar Rigging Model W-2, Sheepsfoot Road Roller
TM 10-500-28-3, Mar W-2 Two Drums in Line, on Modular Platform
TM 10-500-34-3, Mar 1½-Ton 2-Wheel Water Tank Trailer M107A2 on Modular Platform
TM 10-500-47-3, Mar M215, 2½-Ton Dump Truck w/o Winch on Modular Platform
TM 10-500-88-1, Mar 16 Ft Plastic Assault Boats on 6,000 pd Platform
TM 10-500-94-3, Mar M85, A-M Scoop-Type Loader on Modular Platform

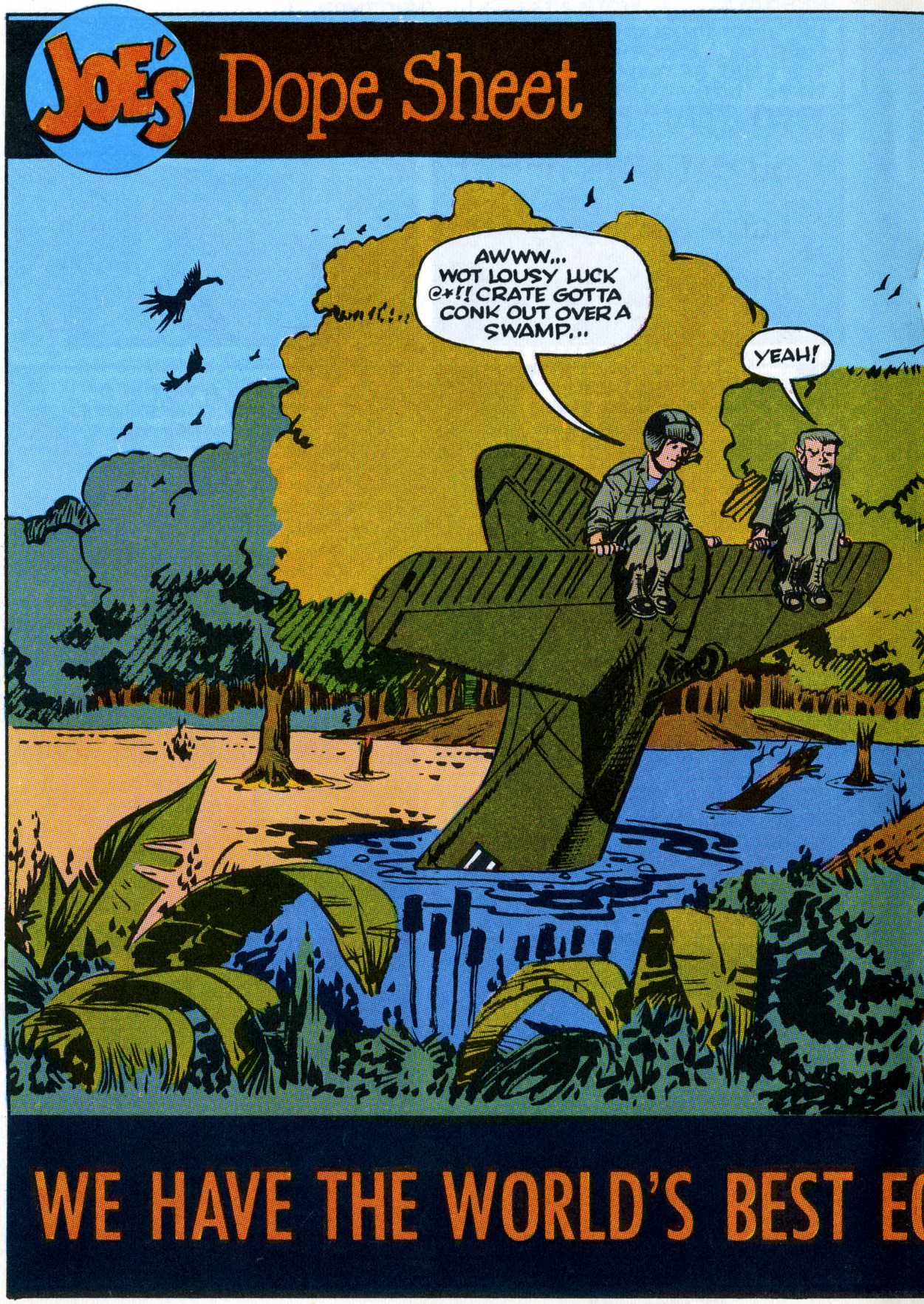
TM 10-1114, Feb Cleaning Bulk Petroleum Storage Tank, Railway Tank Cars, and Tank Trucks
TM 10-8340-201-24, Mar Nike-Herc, Tentage
TM 10-8340-205-13, Feb Tent, Kitchen, Flyproof, M1948
TM 11-5841-231-20P, Mar U-8
TM 11-6625-272-20P, Mar OV-1

JOE'S DOPE
THE SALVATION OF HUBERT V. PFTHBRR* (huh?)
*Editor's note: in order to pronounce or sound above name purse lips, stick tongue between teeth and blow. Result . . . "Pfthbrr"
HERE WE GO! RIGHT IN THE SIDE POCKET...
TARGET...1250 METERS.
HEP!
ARMORED PERSONNEL CARRIER
UP!
IDENTIFIED
STOP!!
THERE'S SOMEBODY IN THE TARGET AREA!!
HOOK TH' SPURS TO IT PHIL... LET'S SEE WHO THIS MANIAC IS...
GRIND
RUMBLE
ROARRRR
GASP HUBERT!! WOT IN BLAZES...GET OUT FROM BEHIND THAT TARGET!! THAT'S AN ORDER...
AWWWW... OK, SARGE IF YOU SAY SO. =SOB= =SOB= =SOB=

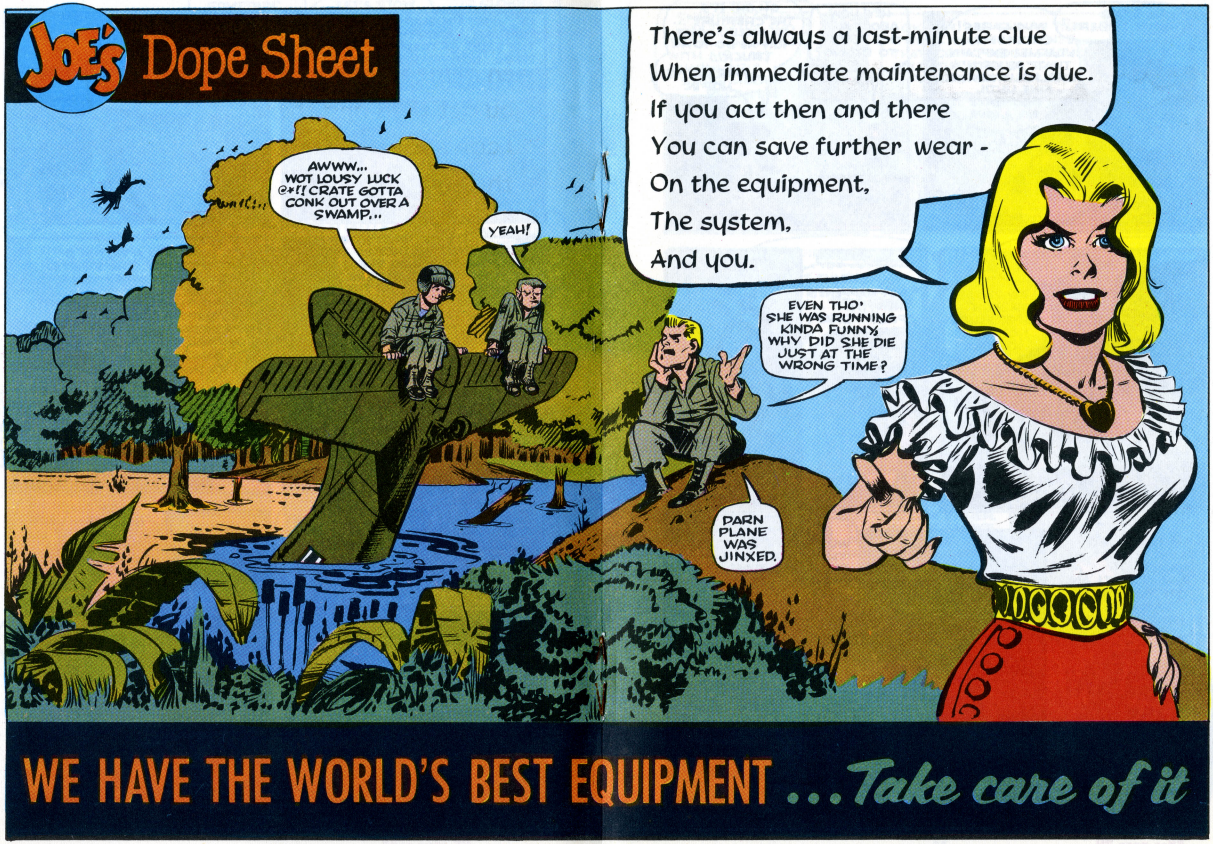
-SOB- WHEEZ! SOMETHIN' LIKE THAT... IT'S FAST AND PAINLESS.
WOT ARE YOU BUCKIN' FOR... A FIVE-THOUSAND-FOOT PER SEC BUST IN TH' MOUTH?
LET'S STOW THAT TALK OL' BUDDY... IT CAN'T BE THAT ROUGH.
-SLOBBER- I'VE HAD IT, SARGE... YOU KNOW WOT I AM.
THE COMPANY JINX! THE ORIGINAL "HEX" HEAD, BAD LUCK...
CUT IT OUT! Y'R RUSTIN' TH' ROAD WHEELS WITH THEM SALTY TEARS.
I DESTROY EVERYTHING I EVEN LOOK AT. -SOB-
-SNIFF- HOW ABOUT TH' ANGRY-19 INCIDENT?
YESSIR... BEST LIL' RADIO WE EVER HAD... ALWAYS ON "FREQ" AND HOT TO TROT... REAL "STRAC!"
PSSS! HERE COMES YOU-KNOW-WHO! DUCK...
HI! YOU GUYS...
ZAP
HALP! FIRE...
GET THAT EXTINGUISHER.
SEE WOT I MEAN, I WAS JUST PASSING BY, AND PFTHBRR*

*See page 29

OK, "JINX," I'M GLAD YOU MENTIONED THAT...ER... ANGRY-19 INCIDENT. IT'S THE FAULT OF THEM "HOT MARCONI" TYPES...NOT YOU!! LEAVE US LOOK INTO THIS JEEP-MOUNTED RIG, WHILST I ENLIGHTEN YOU.
TH' TRANSMITTER'S GOT A BLOWER RIG IN IT... AND THOSE GUYS ARE REAL USED TO IT KICKIN' IN WHEN YOU HIT THE PUSH T' TALK BUTTON ...S-O-O, WHEN YOU...
CLICK
...HAPPENED BY, THEY WERE HOOKIN' INTO THE NET. THEY STARTED PUTTIN' OUT WITHOUT NOTICING THE BLOWER MOTOR NOT KICKIN' IN...SHE STARTED OVER-HEATIN' BEFORE YOU EVEN SHOWED UP!
YOU ...BECAME A VICTIM O' CIRCUMSTANCE. SHE STARTED SMOKING JUST WHEN YOU PASSED BY...THOSE GUYS SHOULDA NOTICED THAT FAULTY MOTOR LONG BEFORE, SO I HEAR... NOW! HOW DOES THAT GRAB YOU?
HUH! WHERE'D HE GO?
"SOB" MEANS NOTHIN'... HOW ABOUT THAT TRUCK, N' THAT M60 TANK, 'N' THE LATEST ...A CHOPPER! NO LESS
@*!! GET OUT FROM UNDER THERE!
"SOB" START UP THIS TANK!
LEMME GO! PUL-LEEZE.
HEY PHIL! GET DOWN HERE, 'N' SIT ON THIS GUY ..."GRUNT" LEGGO OF THEM END CONNECTORS!
GRUNT
STRUGGLE



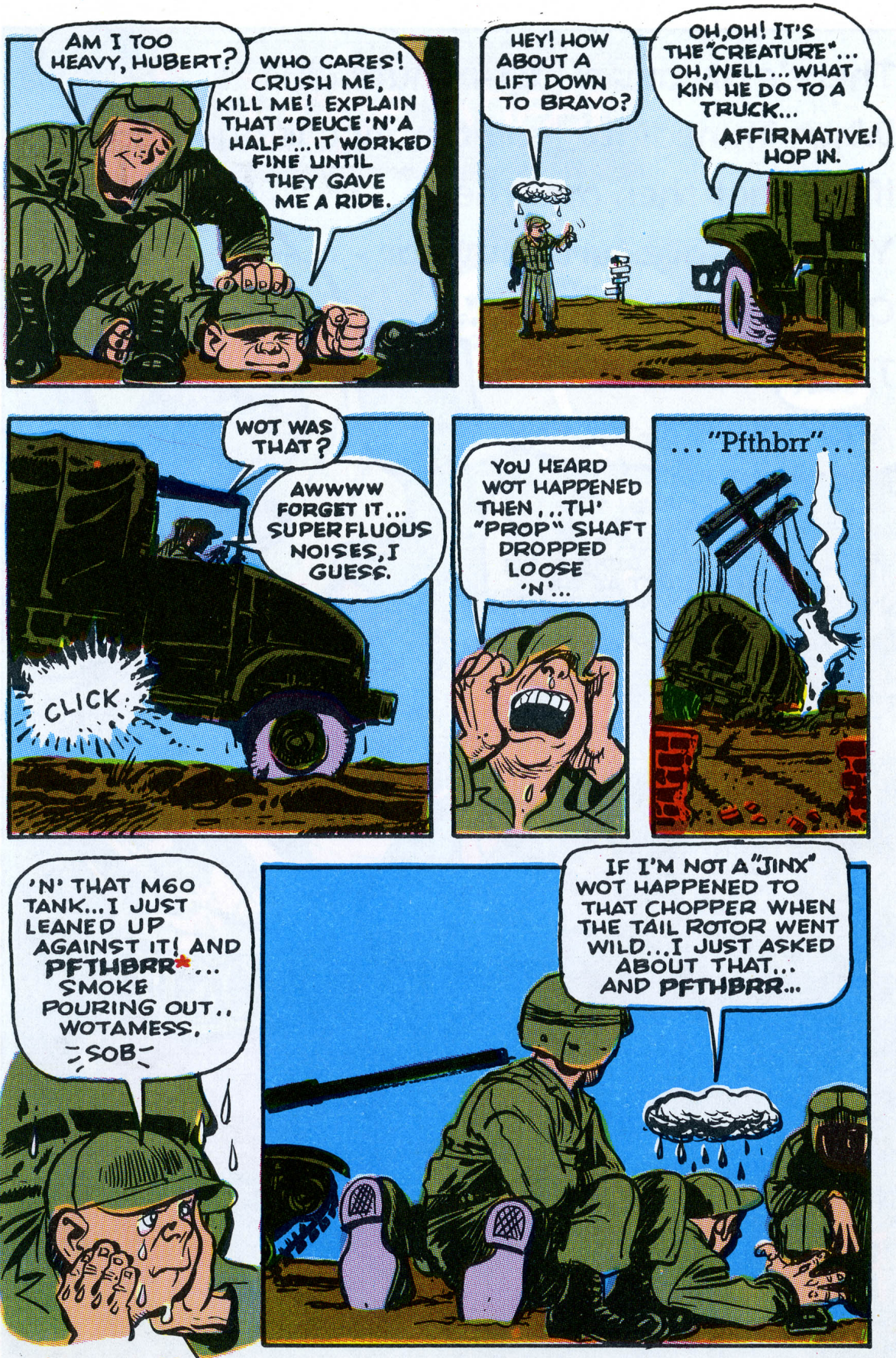
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR B



IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

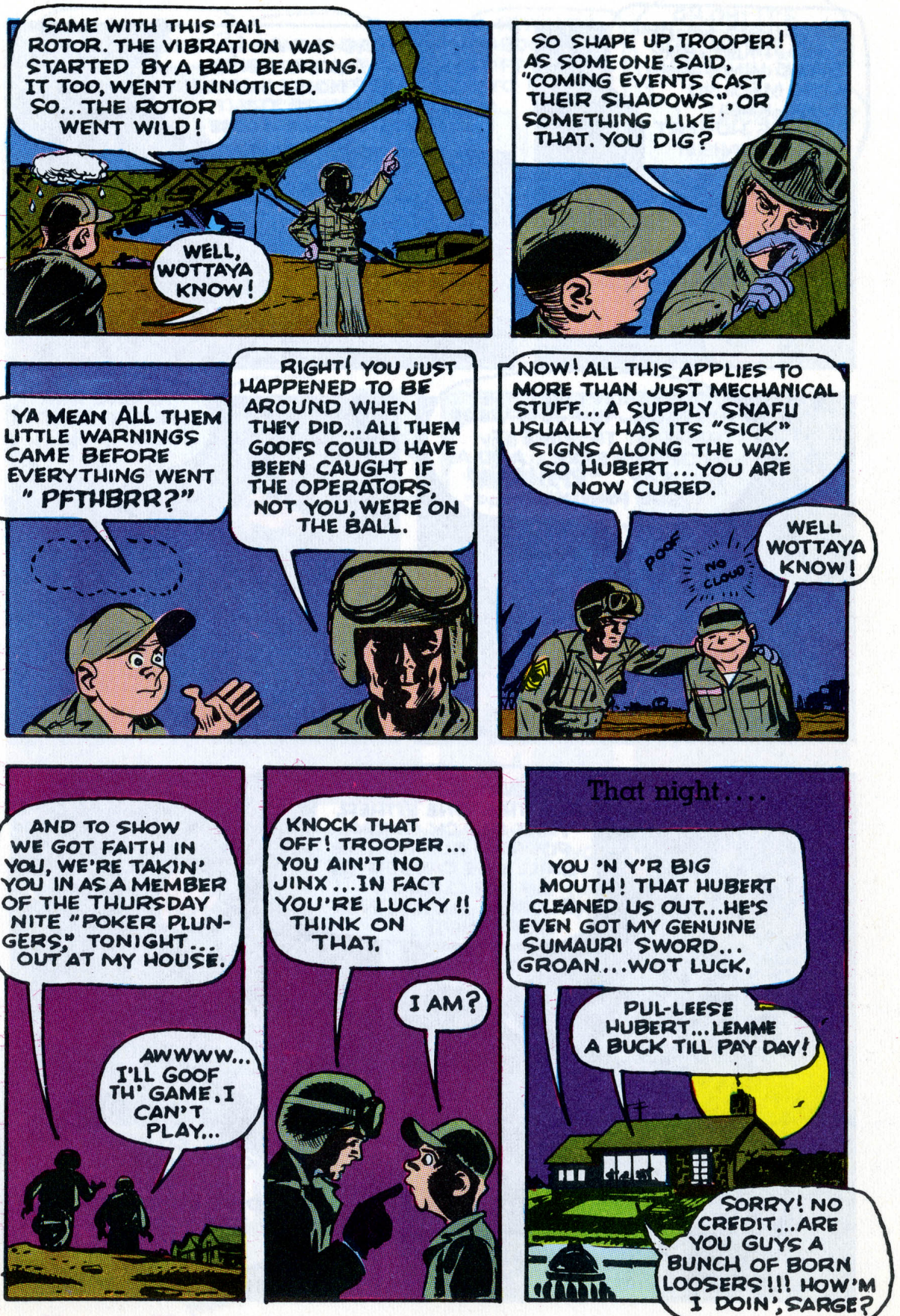
QUIPMENT . . . Take care of it

ULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


AM I TOO HEAVY, HUBERT?
WHO CARES! CRUSH ME, KILL ME! EXPLAIN THAT "DEUCE 'N' A HALF"... IT WORKED FINE UNTIL THEY GAVE ME A RIDE.
HEY! HOW ABOUT A LIFT DOWN TO BRAVO?
OH, OH! IT'S THE "CREATURE"... OH, WELL... WHAT KIN HE DO TO A TRUCK...
AFFIRMATIVE! HOP IN.
WOT WAS THAT?
AWWWW FORGET IT... SUPERFLUOUS NOISES, I GUESS.
CLICK
YOU HEARD WOT HAPPENED THEN... TH' "PROP" SHAFT DROPPED LOOSE 'N'...
... "Pfthbrr"...
'N' THAT M60 TANK... I JUST LEANED UP AGAINST IT! AND PFTHBRR*... SMOKE POURING OUT.. WOTAMESS. SOB
IF I'M NOT A "JINX" WOT HAPPENED TO THAT CHOPPER WHEN THE TAIL ROTOR WENT WILD... I JUST ASKED ABOUT THAT... AND PFTHBRR...

*See page 29

SHADDAP! OK PHIL ...LET 'IM UP, AND BRING HIM ALONG WITH ME... NO "HARI-KARI" STUFF HUBERT ... PROMISE!
OK.
OK NOW!! AS FAR AS THAT TRUCK WAS CONCERNED, THAT :CLINK: NOISE SHOULDA TOLD THE DRIVER THE PROP SHAFT WAS LOOSE.
THEY DIDN'T GET THE MESSAGE... YOU JUST WERE THERE AT TH' TIME IT DROPPED FREE... AND AS YOU SAY... "PFTHBRR" ...SHE RAN WILD.
OH!
BRING HIM OVER TO THIS M60, PHIL...
YR' BAD LUCK DIDN'T BUG THIS ONE EITHER. THAT BLACK SMOKE POURIN' OUT OF THE GRILL WAS CAUSED BY AN AIR CLEANER BLOWER MOTOR NOT WORKING!!
IT WAS?
SO IF THE CREW HAD CHECKED ALL FOUR OF THE DISCHARGE ELBOWS THEY COULD HAVE HEADED THIS ONE OFF!!


SAME WITH THIS TAIL ROTOR. THE VIBRATION WAS STARTED BY A BAD BEARING. IT TOO, WENT UNNOTICED. SO...THE ROTOR WENT WILD!
WELL, WOTTAYA KNOW!
SO SHAPE UP, TROOPER! AS SOMEONE SAID, "COMING EVENTS CAST THEIR SHADOWS", OR SOMETHING LIKE THAT. YOU DIG?
YA MEAN ALL THEM LITTLE WARNINGS CAME BEFORE EVERYTHING WENT "PFTHBRR?"
RIGHT! YOU JUST HAPPENED TO BE AROUND WHEN THEY DID... ALL THEM GOOFS COULD HAVE BEEN CAUGHT IF THE OPERATORS, NOT YOU, WERE ON THE BALL.
NOW! ALL THIS APPLIES TO MORE THAN JUST MECHANICAL STUFF... A SUPPLY SNAFU USUALLY HAS ITS "SICK" SIGNS ALONG THE WAY. SO HUBERT...YOU ARE NOW CURED.
POOF
NO CLOUD
WELL WOTTAYA KNOW!
AND TO SHOW WE GOT FAITH IN YOU, WE'RE TAKIN' YOU IN AS A MEMBER OF THE THURSDAY NITE "POKER PLUNGERS," TONIGHT... OUT AT MY HOUSE.
AWWWW... I'LL GOOF TH' GAME, I CAN'T PLAY...
KNOCK THAT OFF! TROOPER... YOU AIN'T NO JINX...IN FACT YOU'RE LUCKY!! THINK ON THAT.
I AM?
That night....
YOU 'N Y'R BIG MOUTH! THAT HUBERT CLEANED US OUT...HE'S EVEN GOT MY GENUINE SUMAURI SWORD... GROAN...WOT LUCK.
PUL-LEESE HUBERT... LEMME A BUCK TILL PAY DAY!
SORRY! NO CREDIT...ARE YOU GUYS A BUNCH OF BORN LOOSERS!!! HOW'M I DOIN', SARGE?

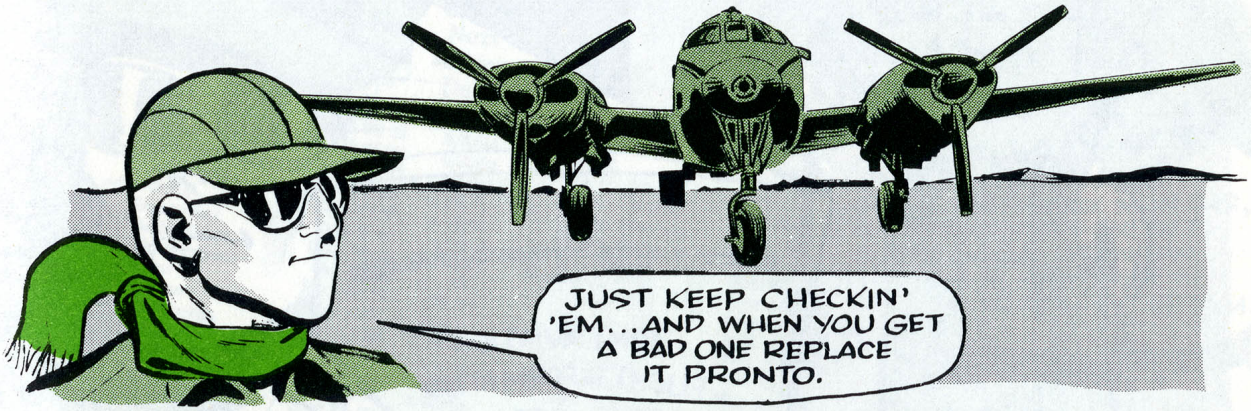
"SPIN A WINNER"

Dear Windy,

How can you win with the propeller spinner on a Seminole (U-8) engine? Using stainless steel reinforcing plates on one that's cracked doesn't seem to solve the problem.

Is there a dome fix that really works?

SP 6 A. C. B.



Dear Specialist A. C. B.,

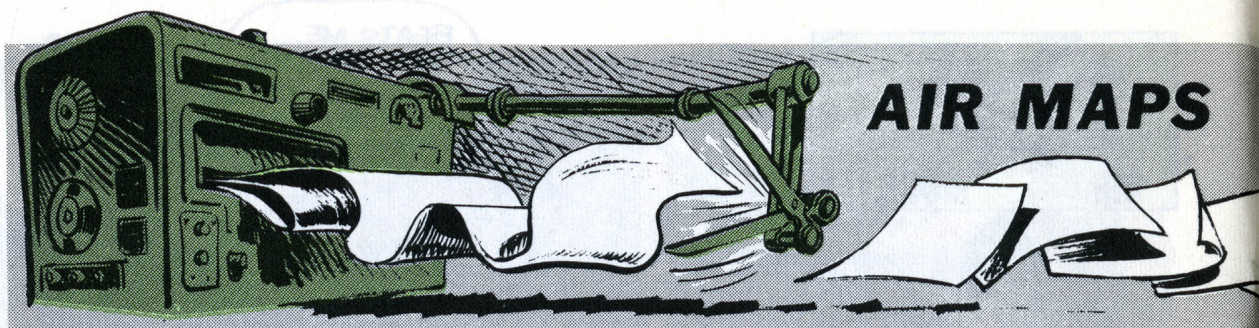
There isn't any fool-proof repair. Project 61-4833 (7006-2) in Chap 5 of TB AVN 23-5-1 (9 Apr 63), which called for use of the .050-in reinforcing plates, is being taken out of the EIR Digest.

Your best bet is to play the inspection game to the hilt, by carefully eyeballing the spinner every Daily, Intermediate and Periodic.

This means checking the rear bulkhead mounting screws and, after an engine feathering, making sure that the propeller blade balance weights don't hit the nut plate that holds the anti-icer screw and clamp on the spinner shell.

'Course if you find a cracked spinner, it gets replaced with one listed in TM 55-1510-201-20P (1 Jul 63)—pronto.

Windy



AIR MAPS

Dear Windy,

Can you give us any information on how to get aeronautical charts on a recurring basis? Is there some way to make out one req which will give us future changes to these charts on automatic distribution?

Operations Office Inhabitants

NEVER HOPPEN! SORRY--BUT THERE'S BEEN NO AUTOMATIC DISTRIBUTION OF THESE CHARTS (EXCEPT FOR THE AVIATION SCHOOL) SINCE 1958.

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN TB SIG 1-389

ARMY AVIATION FLIGHT INFORMATION DIGEST

THIS ISSUE SUPPLEMENTS TO SIG 1-387 & NOVEMBER 1963

DEPARTMENT OF THE ARMY 20 NOVEMBER 1963

THE ONLY CORRECT WAY TO STAY CURRENT ON SECTIONALS, WACS, AND LOCALS IS BY CHECKING THIS OUT FOR THE LASTEST LISTING.

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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN TB-55-1-385

ARMY AVIATION FLIGHT INFORMATION DIGEST

DEPARTMENT OF THE ARMY 20 NOVEMBER 1963

THE ONLY CORRECT WAY TO STAY CURRENT ON SECTIONALS, WACS, AND LOCALS IS BY CHECKING THIS OUT FOR THE LASTEST LISTING.

AIN'T AUTOMATIC

THEN... IMMEDIATELY REACH FOR AN 1149-4 AND FILL IT OUT LIKE THIS:

DD FORM 1 JUL 55 1149-4

REQUISITION AND INVOICE/SHIPPING DOCUMENT

1	Commanding Officer	1. REQUISITION DATE: Today
2	Jet Stop Army Air Field, Fort Quick Start, Wyoming	2. DATE MATERIAL REQUIRED: Yesterday
3	C.O., Army Map Service	3. PRIORITY: Top
4	Corps of Engineers, ATTN: Code 6230	4. AUTHORITY OR PURPOSE: AR 95-11
5	Washington, DC 21347	5. SIGNATURE: F C Pilot
6	Operations Officer	6. DATE SHIPPED
7	Jet Stop AAF	7. MODE OF SHIPMENT
8	Fort Quick Start, Wyoming	8. BILL OF LADING NUMBER

9. ACCOUNTING AND FUNDING DATA: Reenbursement not required in accordance with AR 117-5

ITEM NO.	STOCK NUMBER AND DESCRIPTION OF MATERIAL AND/OR SERVICES	UNIT OF ISSUE	QUANTITY REQUESTED	QUANTITY SHIPPED	UNIT COST	TOTAL COST
	SECTIONAL AERONAUTICAL CHARTS					
1	Cheyenne					
2	Denver	ea	15			
3	Lincoln	ea	15			
		ea	3			
	WORLD AERONAUTICAL CHARTS					
1	305	ea				
2	306	ea				
3	207	ea				
	LOCAL AERONAUTICAL CHART					
1	Denver	ea	12			

Aberdeen	Current Edition Date	Next Edition Date
Albany	Aug 22 63	3/5/64
Albuquerque	Jul 25 63	2/6/64
Aroostook	Aug 22 63	3/5/64
→ Austin	May 2 63	4/30/64
Beaumont	Nov 14 63	4/30/64
* Bellingham	Sep 19 63	4/2/64
Birmingham	May 30 63	12/12/63
Boise	Oct 17 63	4/30/64
Boston	May 30 63	5/28/64
→ Burlington	Sep 19 63	3/5/64
Butte	Nov 14 63	4/30/64
Casper	Jul 25 63	2/6/64
Charlotte	Oct 17 63	4/2/64
Chattanooga	Aug 22 63	4/30/64
* Cheyenne	Jun 27 63	2/6/64
* Chicago	May 30 63	12/12/63
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Dallas	Jul 25 63	2/6/64
→ Del Rio	Nov 14 63	2/6/64
Fargo	Aug 22 63	3/5/64
Glacier Park	Oct 17 63	2/6/64
* Grand Canyon	May 30 63	4/30/64
→ Grand Junction	Nov 14 63	4/30/64
* Green Bay	May 30 63	4/2/64
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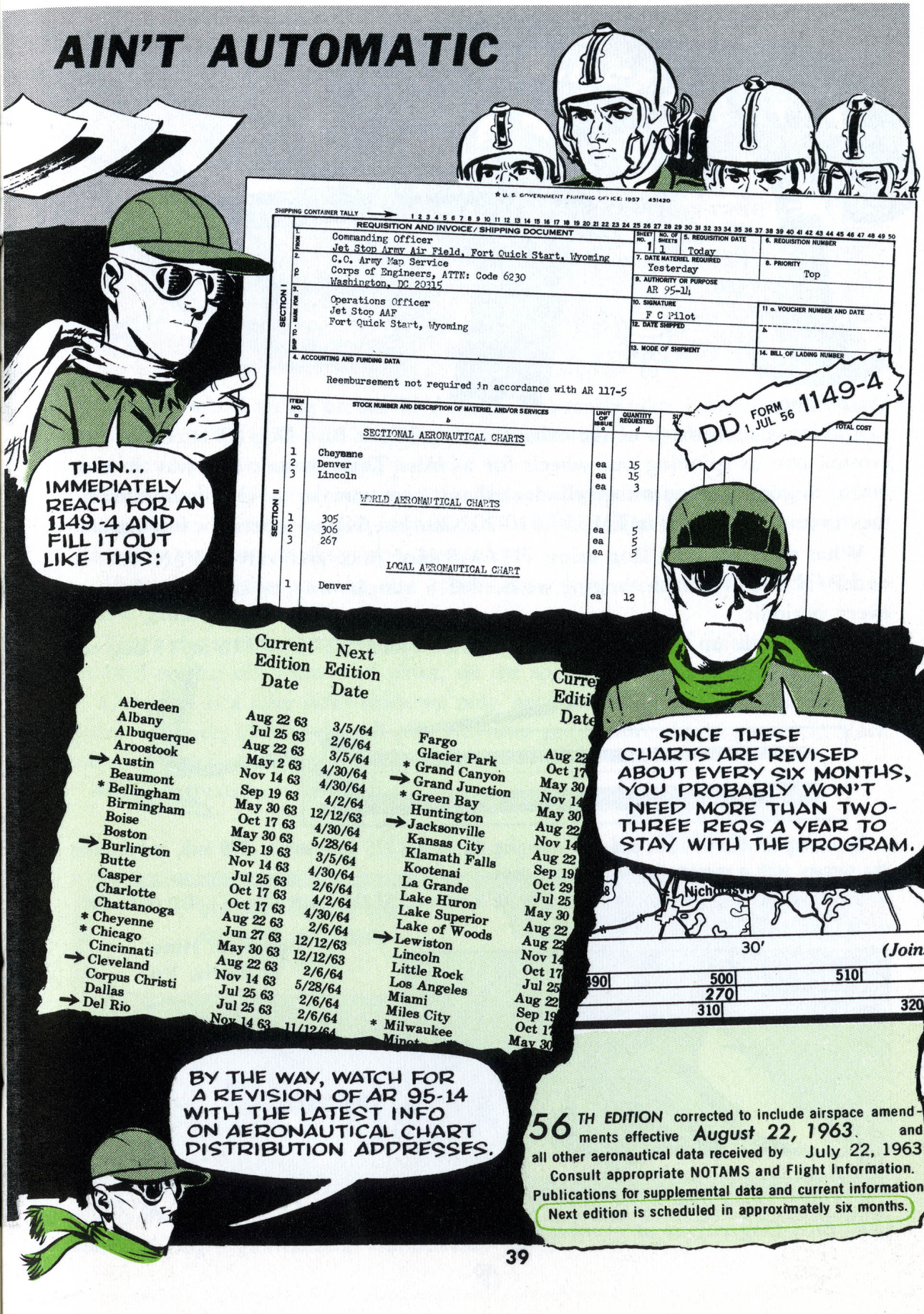
Kootenai	May 30 63	4/30/64
La Grande	Aug 22 63	2/6/64
Lake Huron	Oct 17 63	4/2/64
Lake Superior	Jul 25 63	4/30/64
Lake of Woods	May 30 63	2/6/64
→ Lewiston	Aug 22 63	12/12/63
Lincoln	Oct 17 63	12/12/63
Little Rock	Jul 25 63	2/6/64
Los Angeles	Aug 22 63	2/6/64
Miami	Nov 14 63	11/19/64
Miles City	Jul 25 63	3/5/64
* Milwaukee	May 30 63	4/30/64
Minot	Aug 22 63	4/30/64

SINCE THESE CHARTS ARE REVISED ABOUT EVERY SIX MONTHS, YOU PROBABLY WON'T NEED MORE THAN TWO-THREE REQS A YEAR TO STAY WITH THE PROGRAM.

BY THE WAY, WATCH FOR A REVISION OF AR 95-14 WITH THE LATEST INFO ON AERONAUTICAL CHART DISTRIBUTION ADDRESSES.

56TH EDITION corrected to include airspace amendments effective August 22, 1963 and all other aeronautical data received by July 22, 1963. Consult appropriate NOTAMS and Flight Information Publications for supplemental data and current information. Next edition is scheduled in approximately six months.

AIN'T AUTOMATIC



★ U. S. GOVERNMENT PRINTING OFFICE: 1957 451420

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REQUISITION AND INVOICE / SHIPPING DOCUMENT

SECTION I

FROM: 1. Commanding Officer
Jet Stop Army Air Field, Fort Quick Start, Wyoming

2. C.O. Army Map Service
TO: Corps of Engineers, ATTN: Code 6230
Washington, DC 20315

SHIP TO - MARK FOR: 3. Operations Officer
Jet Stop AAF
Fort Quick Start, Wyoming

SHEET NO.	NO. OF SHEETS	5. REQUISITION DATE	6. REQUISITION NUMBER
1	1	Today	

7. DATE MATERIEL REQUIRED	8. PRIORITY
Yesterday	Top

9. AUTHORITY OR PURPOSE: AR 95-14

10. SIGNATURE	11 a. VOUCHER NUMBER AND DATE
F C Pilot	b.

12. DATE SHIPPED	13. MODE OF SHIPMENT	14. BILL OF LADING NUMBER

4. ACCOUNTING AND FUNDING DATA

Reembursement not required in accordance with AR 117-5

SECTION II

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		ea	5		
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Lincoln		
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Miami		
Miles City		
* Milwaukee		
Minot		

Curre... Edit... Date

Aug 22
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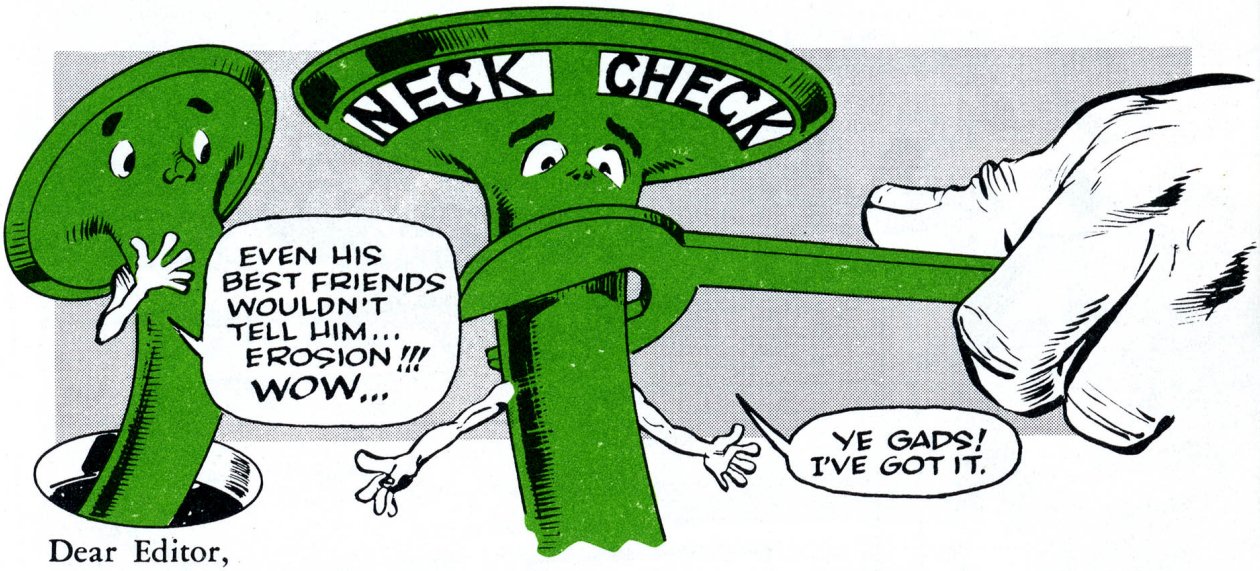
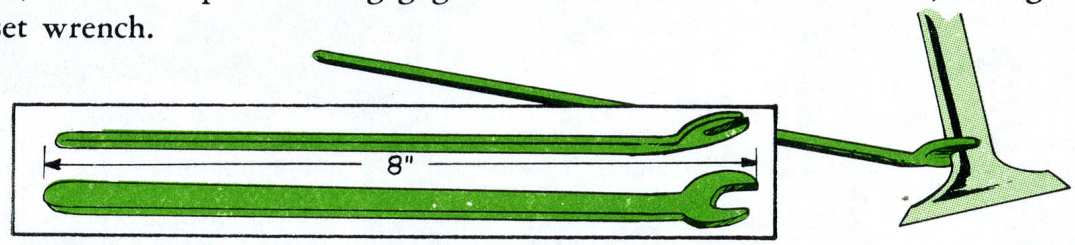


Dear Editor,

Making a neck check of the exhaust valves in our Bird Dog (O-1) engine for erosion had us spinning our wheels for awhile. There wasn't any way in the world to get a gage into the cylinder exhaust port to make the .390-in minimum measurement called for in TM 55-1510-202-20 (Jan 64), on a periodic inspection.

What with our Bird Dog using 115/145 bird juice and valves, P/N 40651 and P/N 539449, in the engine we needed a simple way to check erosion at every periodic.

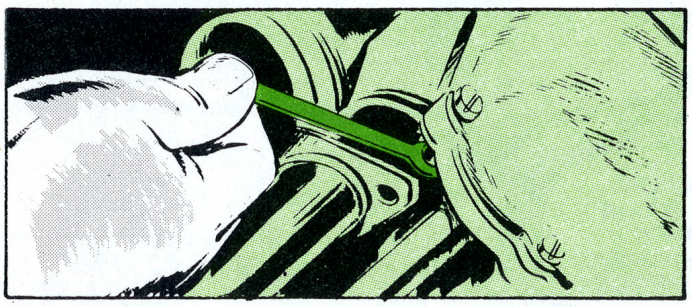
So, we made up a checking gage from a commercial 3/8 x 7/16-in, 15-degree offset wrench.

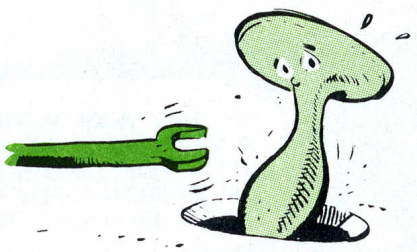


By cutting off the 7/16-in end and enlarging the 3/8-in (.375 inch) end to .390 inch, and checking the surgery with a micrometer, we had our gage.

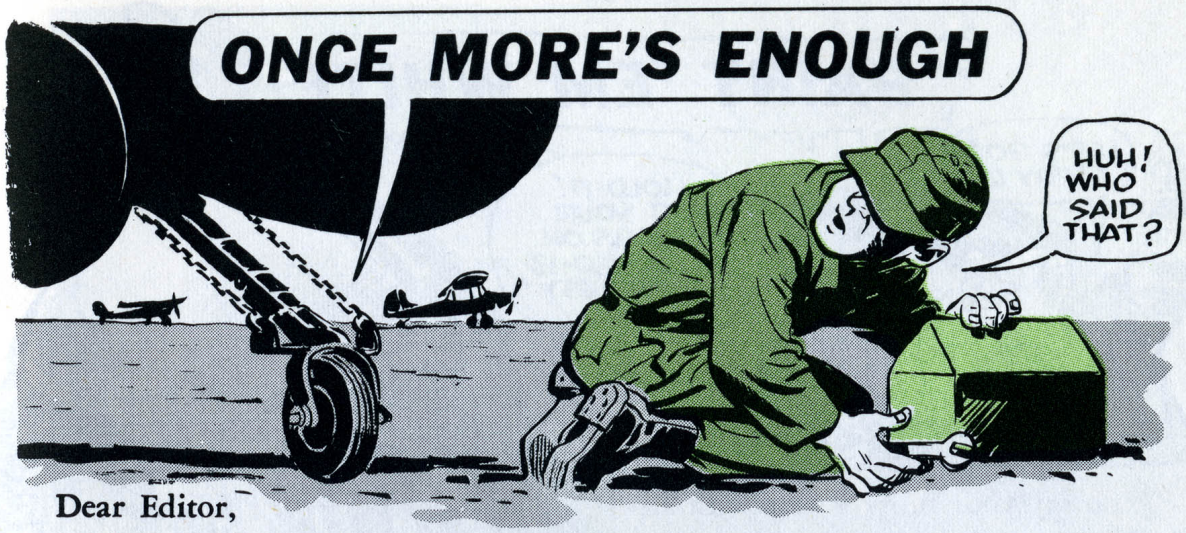
Now, checking the exhaust valve is a breeze. If the gage doesn't slip over the neck, she's OK.

Dennis J. Hines
Ft Eustis, Va.





(Ed Note—Good deal until more of the beefed-up valves, P/N 626540, get into your Bird Dog engine at overhaul.)



Dear Editor,

The tail wheel spring on our Bird Dogs (0-1) really takes it on the chin. Small wonder TM 55-1510-202-20 (20 Jan 64) calls for a dye check or magnetic particle inspection every third periodic.

To make the dye penetrant check you have to strip the paint from the spring using paint remover, lacquer thinner and a wire brush. It takes a lot of elbow grease to get down to the porous base metal.

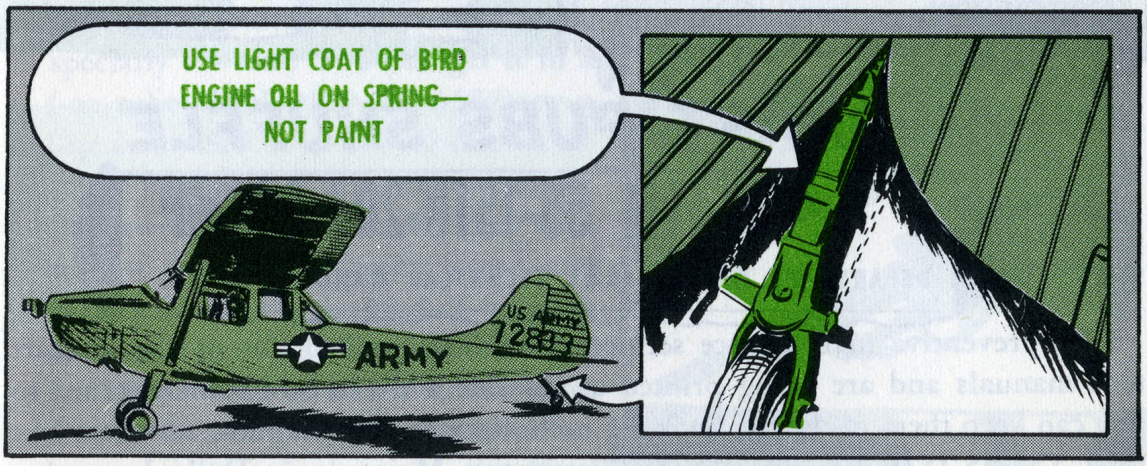
Then there's the priming and repainting job to do after the check—more elbow grease.

That's the way it was here until we hit upon the idea of using a light coat of bird engine oil, instead of paint, on the spring.

Using oil is a mite safer since we only need ordinary cleaning solvent, not paint remover, to take the oil off. You also get a more thorough check, since no paint is left on the spring.

The oil treatment works like a charm.

Robert L. Phillips
Ft Eustis, Va.



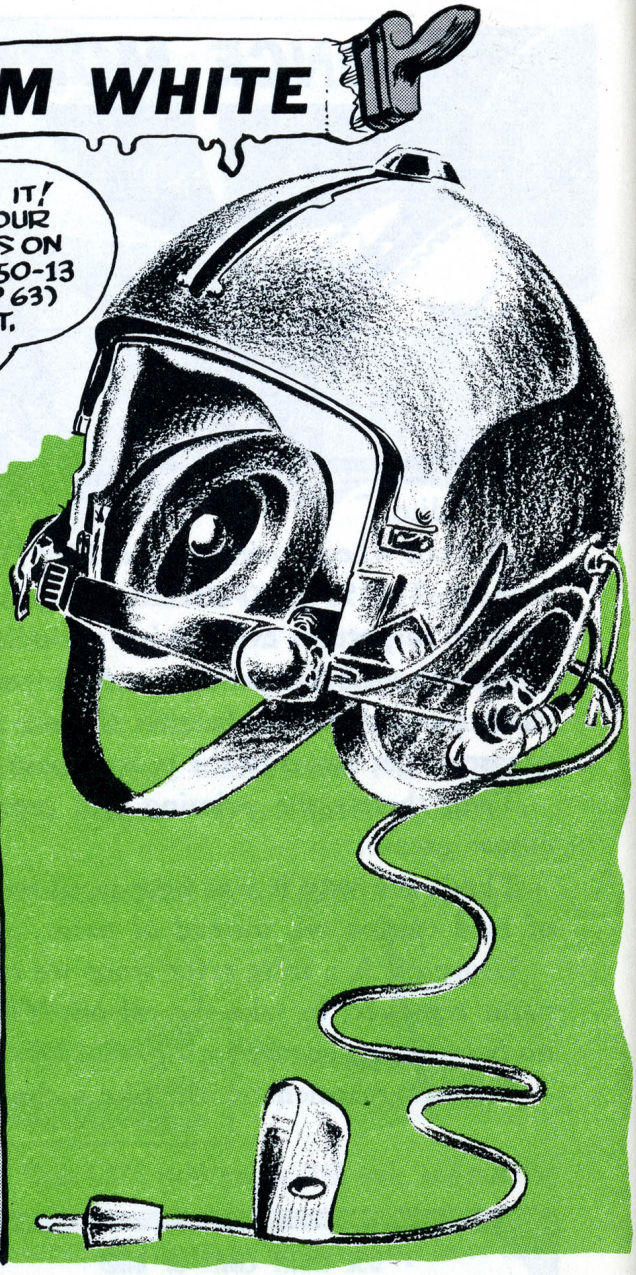
(Ed Note—You have a winner. Fact is, your idea may even go in a revision of the Bird Dog organizational maintenance pub.)

PAINT 'EM WHITE

You say your brow is wet with airborne sweat from your olive green APH-5 flying helmet? And you'd like to paint your headbone protector white to reflect some of that wild blue heat?

Well, doublecheck your earphone plug-in cord and crank in your publications frequency for a reading on DA Cir 750-13 (9 Sep 63), "Repainting APH-5 Protective Flying Helmets With White Enamel".

Repainting is done right at organizational level—and all the info you need to do the job is down in black and white, including FSN's for the enamel. Major commanders can order helmets painted OG for tactical or training troop missions.

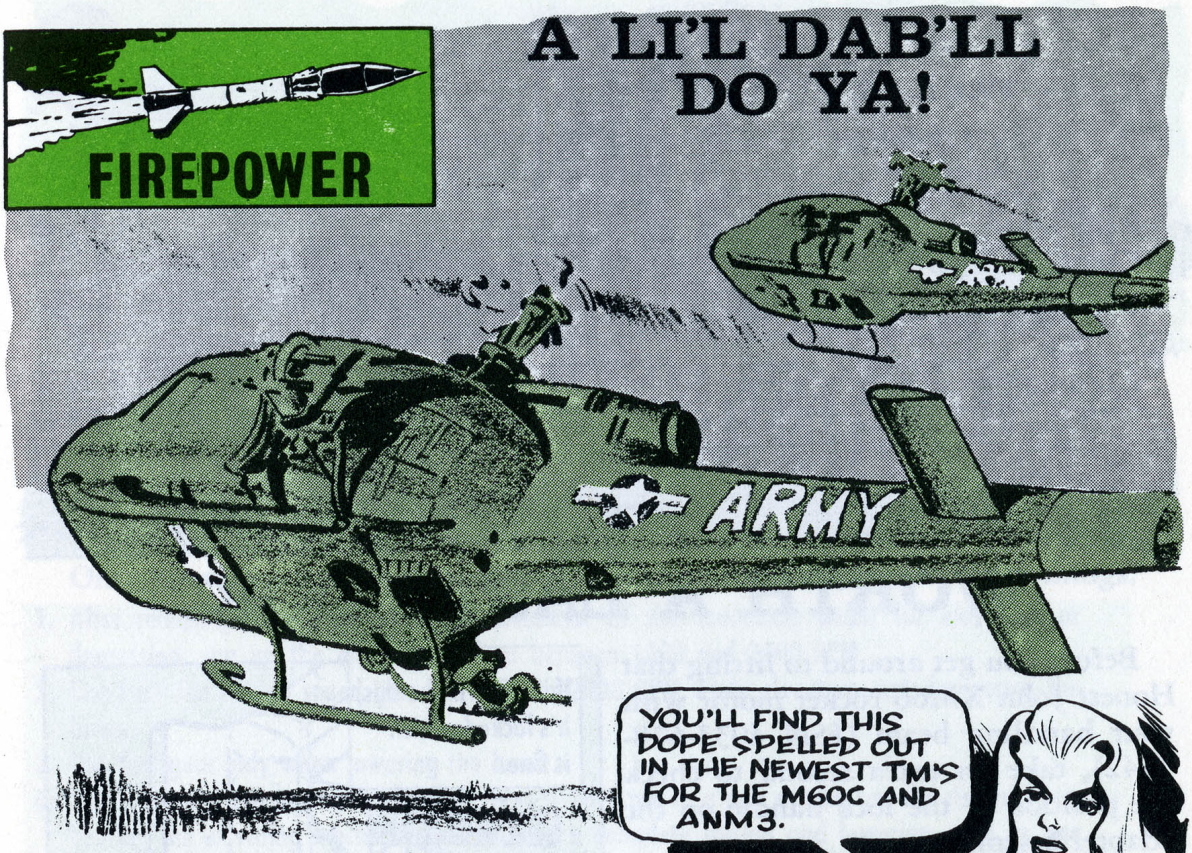


AIRCRAFT PUBS SHUFFLE

TM 55-1510-204-20PMP

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

The preventive maintenance services are being yanked out of the aircraft tech manuals and are being printed as separate TM's in card form punched so you can keep them in the log book for each aircraft. They'll have numbers like this: TM 55-1510-206-20PMD (for Preventive Maintenance Daily Inspection Checklist), PMI for Intermediate and PMP for Periodic.

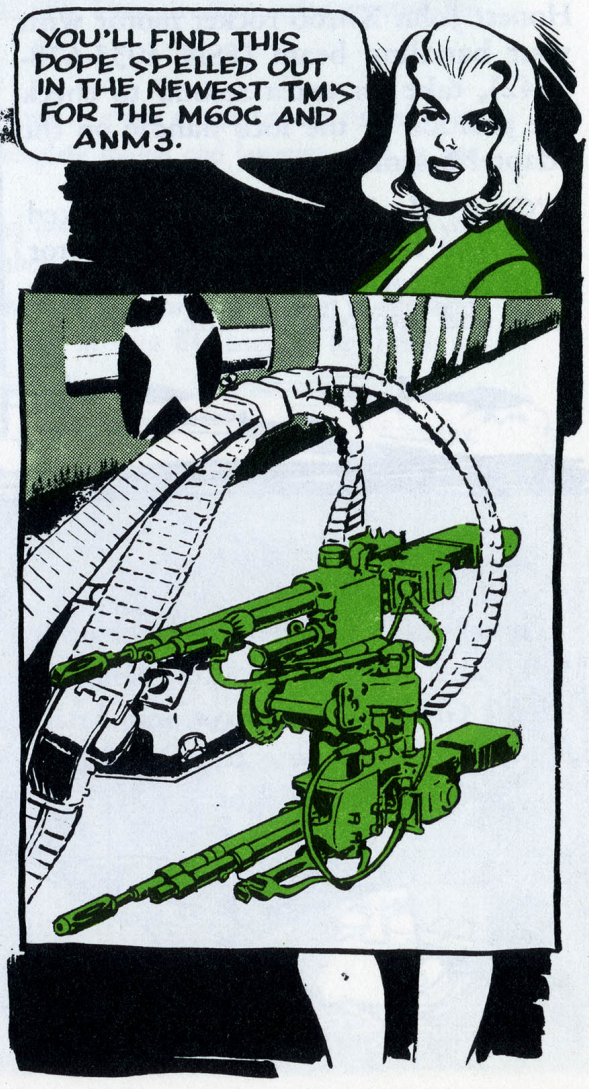


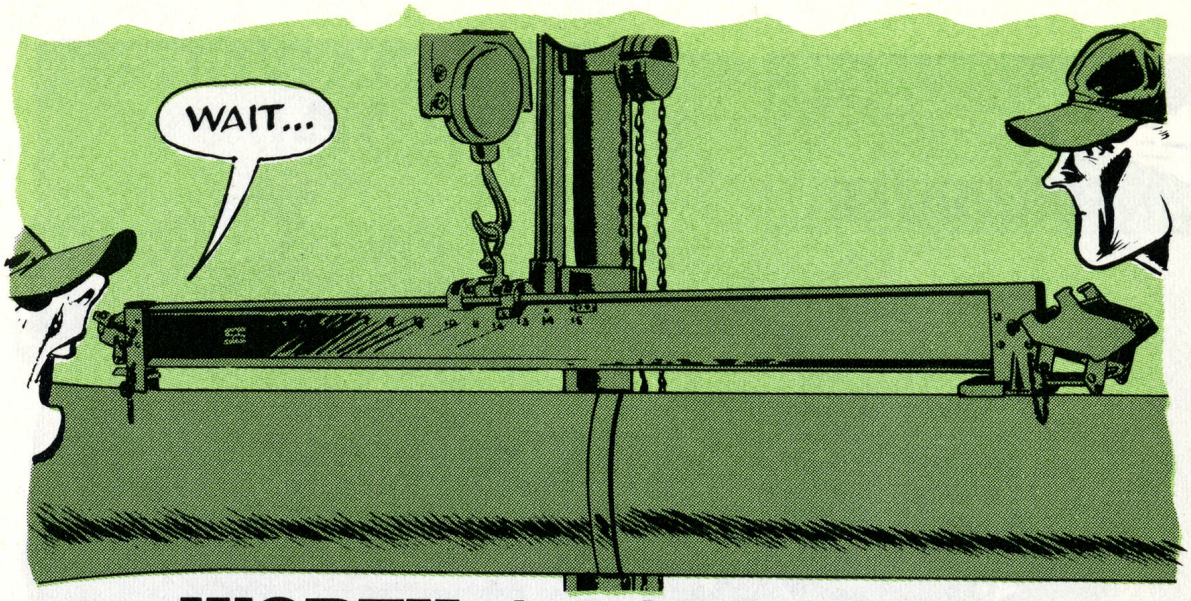
So, maybe the gals won't pursue you if you use this stuff. But a couple airborne machine guns'll just about love you . . . like, say, the 7.62-mm M60C used on the M2 and M6 helicopter armament subsystems, and the .50-cal ANM3 used on the M14 POD for OV-1 aircraft.

Yessir, this here-now new semi-fluid lube oil (LSA) Mil-H-46000's made 'specially for 'em. You can get it in a 4-oz tube (FSN 9150-889-3522) or a 1-qt can (FSN 9150-687-4241).

Use it instead of regular lube oil on these two weapons whenever they need mostest protection against wear and scuffing or against the kind of washing action you get on a rainy flight mission.

All you need is a dab in the right places—bolt camming surfaces, operating rod rollers, feed cams and rollers, firing pin bearings, and such-like.





WORTH A LAST LOOK

Before you get around to lifting that Honest John XM66 rocket motor with your handling beam (FSN 4933-678-3542), take an extra second to check the position of the lock handle on the adapter assembly.

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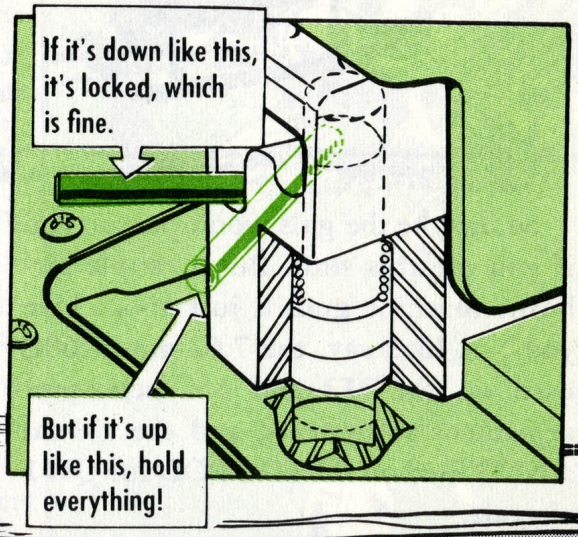
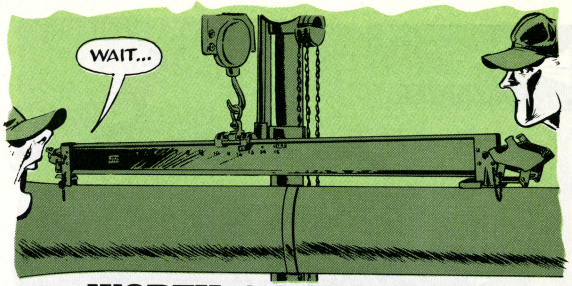


GO 80,

Traversing beam drive units of both M405 and M405A1 rocket handlers call for Grease Automotive and Artillery (GAA), according to LO 9-1055-208-12 (21 Apr 61). Right?

So, what happens? The M405's come through OK with GAA, but the M405A1's have GO 80 (a heavy fluid-type lube) in there, which creates a problem. The GAA'll stand up to any temperature or climate, but GO 80's likely to leak out.

So play it smart. Get your support guys to drain out the GO 80, clean the beam drive assembly good and then repack it with GAA.



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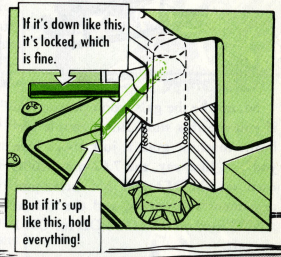

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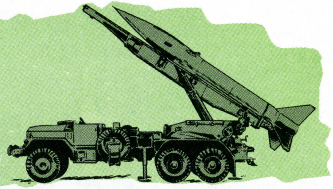
KEEP LAUNCHER LAUNCHING



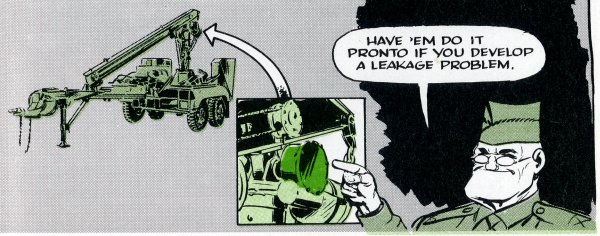
OK . . . so your support people have applied MWO 9-1055-205-30/8 to your M386 Honest John rocket launcher. And the launcher is better for it—what with getting a new elevating mechanism and slip clutch assembly.

But the MWO doesn't leave you out of the picture. No sir-e-e-e, Bob.

Once your launcher has been MWO'd you want to remember these things.

1. After releasing the clutch to begin movement of the launching beam for elevation or depression, run up the engine speed to between 1800 and 2000 RPM.
2. Don't let the engine speed get any higher'n 2000 RPM while elevating and depressing the beam.
3. Use first gear only when lowering the beam.
4. Don't elevate and depress the beam more'n 10 times in a row or you run the risk of overheating the elevating mechanism. You count a complete raising and lowering cycle as one time.
5. Don't do any road traveling unless the launching beam is locked in the travel lock. If you do, you might wind up with a busted ball screw shaft.
6. Before you operate the ball screw elevating mechanism, lube the lower part of it with light preservative oil (PL) the way it tells and shows you in Para 84, page 7, fig 109.1, in Change 3 to TM 9-1055-205-10.

SCRAM!



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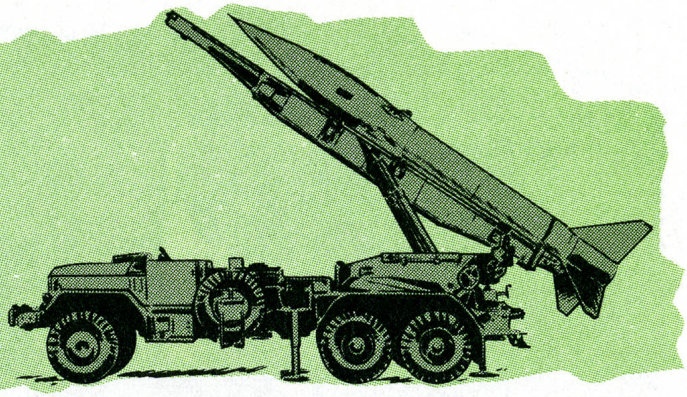

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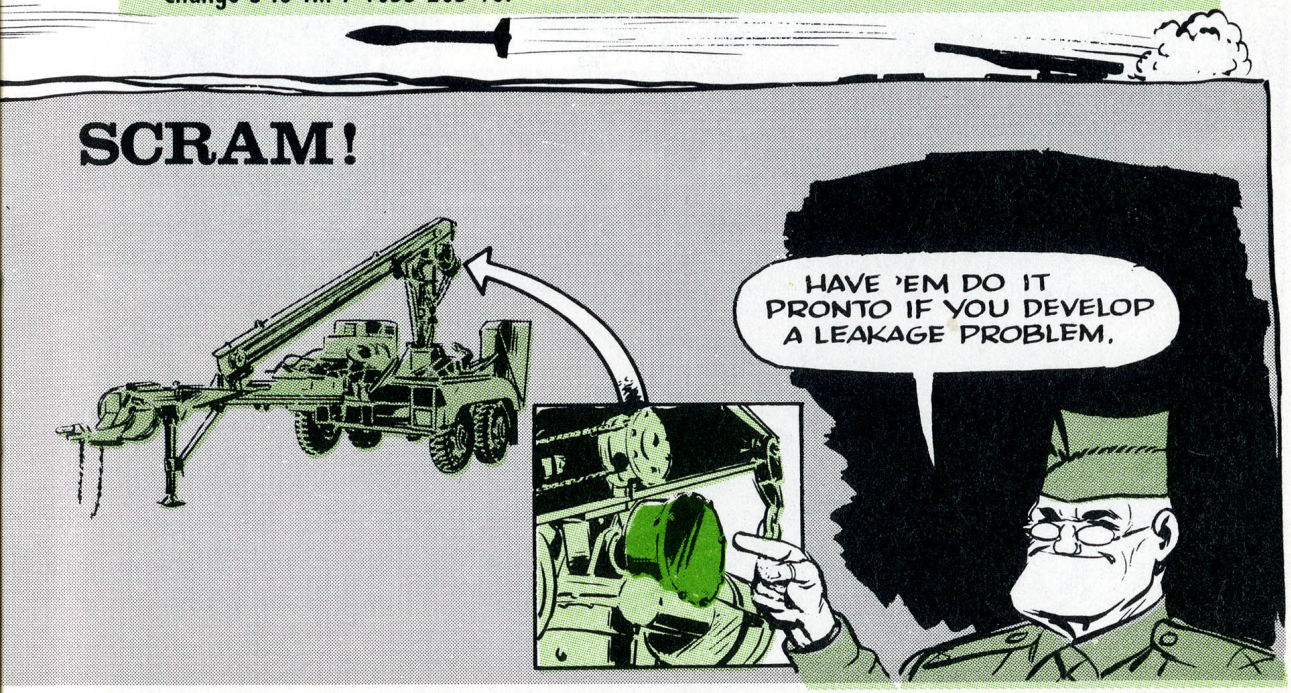
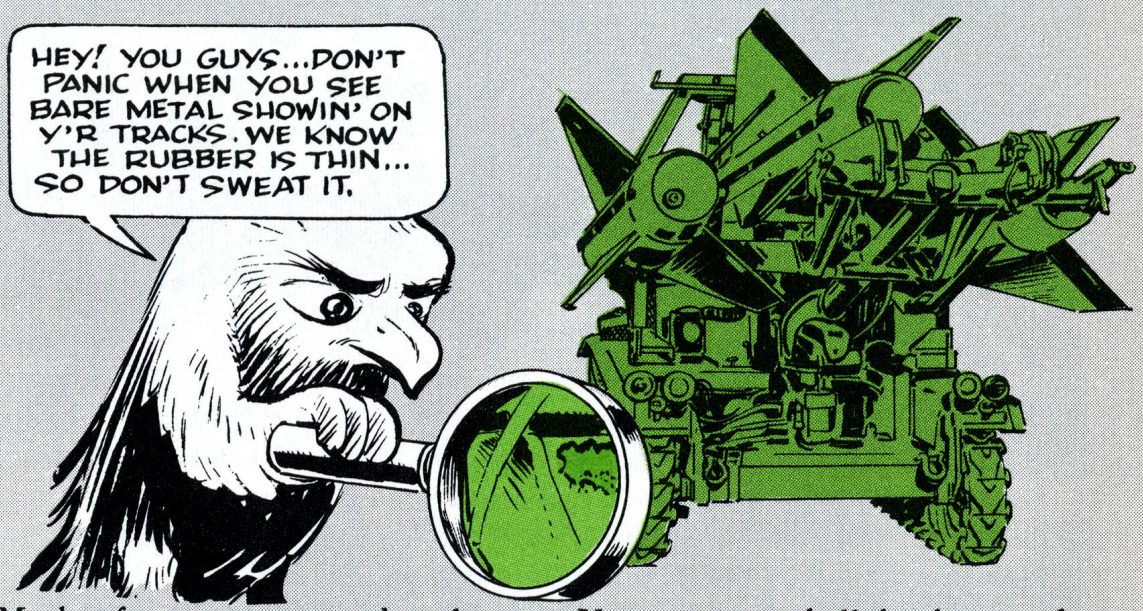


HAWK NOTEBOOK

IT ALL DEPENDS

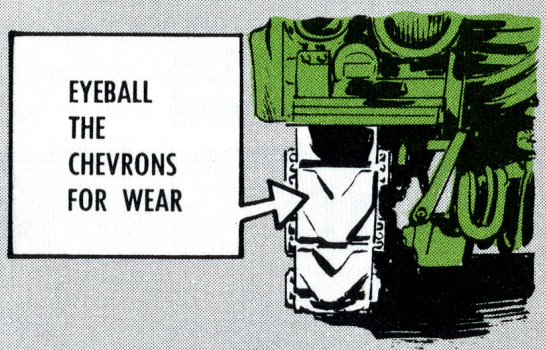


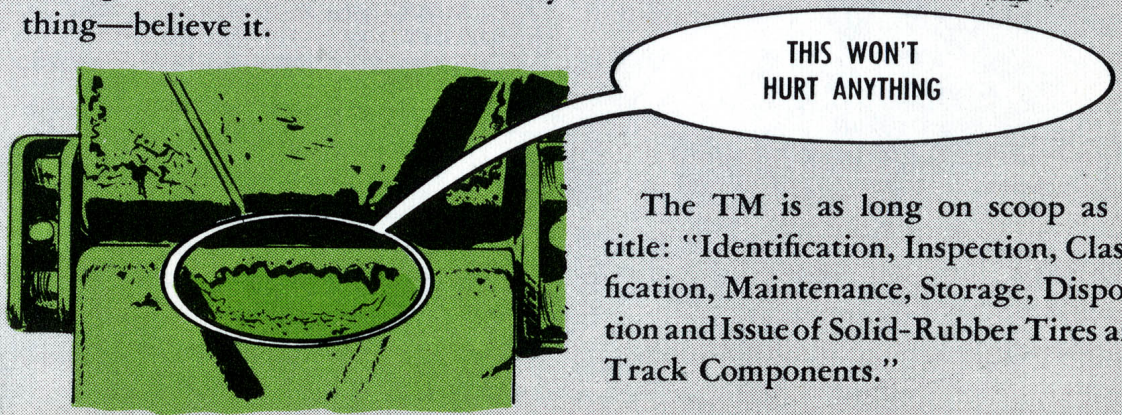
Maybe after you run around on them for a time or two the new track blocks on your Hawk loader don't look like they're fresh out of the factory.

All you have to do is drive the loader tracks over some small stones and the thin (it's about ⅛—in thick) rubber covering on the metal part of the track block will be cut. And the next thing you know the rubber gets chewed up and then starts to fall off.

But that's no reason to let go with a few choice words about the rubber . . . and then maybe requisition some new track blocks. The metal showing through the rubber won't hurt anything—believe it.

You want to eyeball the chevrons for wear. And you don't have to wonder how much a chevron should be worn or beat up before it's time for a new track block. The guesswork disappears when you read TM 9-2630-200-14 (Oct 62).





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HAWK NOTE BOOK

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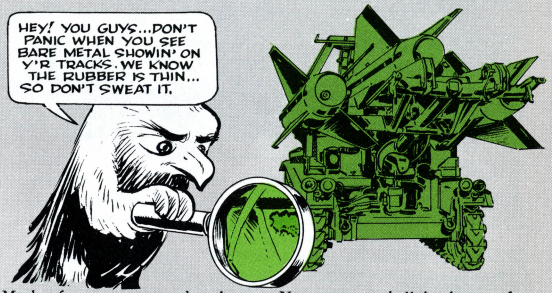

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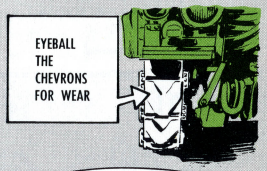

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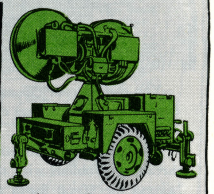
MEET "HERCULES"



He's the guy (the other one, not you) in your Hawk battery who says he doesn't need any help lifting electronic test equipment. After all, he tells you, the test sets are ruggedized.

They sure are. But they're not made for what "Hercules" is about to do as he gets ready to make some checks on the AN/MPQ-33 CW illuminator—all but drop the test set on the fender of the illuminator.

True . . . could be nothing will happen to the test set. Or maybe the case will pick up a small dent or two. But, there's also a chance that some of the electronic gear inside the case will get busted.

Of course, whenever you have to lift any test set more'n a few feet off the ground, you grab the first man going by and ask him to share the load. It sure beats trying to explain how a test set took a beating because you decided you could go it alone.

Maybe you can get your outfit's strongman to come around to the same way of thinking.

CLEANING WILL HELP

You don't have to run out to your launchers and do it right now.

But whenever you have some spare time—even if you have to make the time—it won't hurt to see how things look inside the heat exchanger on your Hawk launcher. You know . . . with an eyeball or two peeled for dirt, dust and anything else that might keep the heat exchanger from doing its job.

All you have to do for a look see is remove the restraining strap that holds the cooling element and motor and blower together.

Just don't give into any temptation you might have to pull the components out of the motor and blower section.

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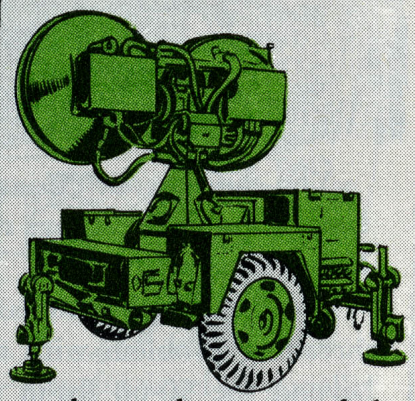

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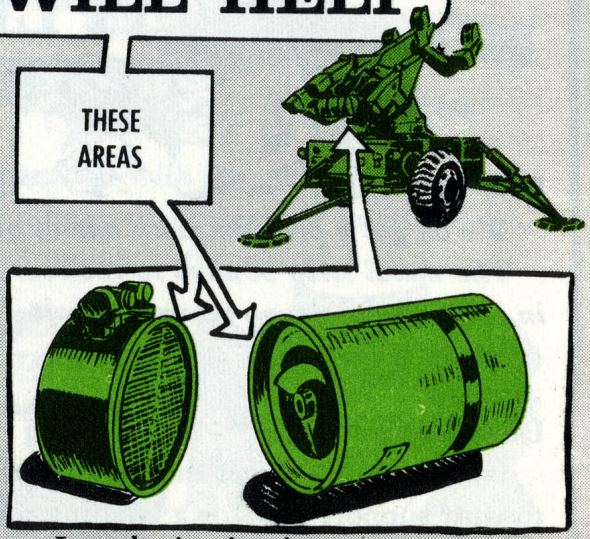
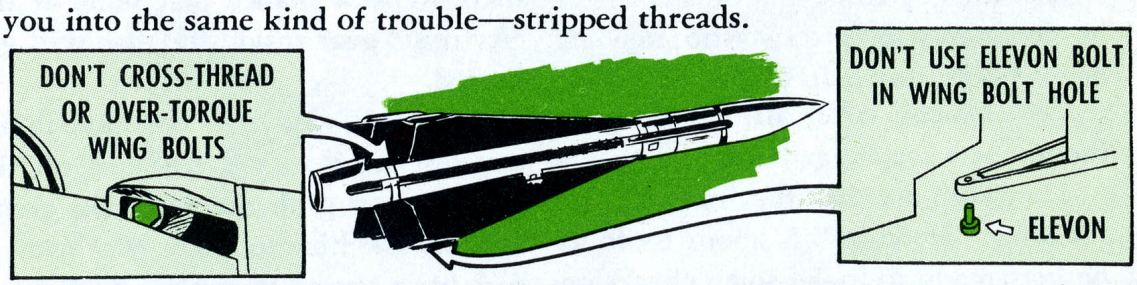


Just don't give into any temptation you might have to pull the components out of the motor and blower section.

You can do yourself—and the people up the maintenance line—a mighty big favor if you take things easy when you install the four aft wing bolts on your Hawk missile.

Don't start tightening any of the bolts until you're sure you don't have a cross-threading problem with the nut each bolt goes into. Likewise . . . going much beyond the 50-60 lbs-in torque you're supposed to put on the bolts will get you into the same kind of trouble—stripped threads.



If the nut threads get stripped, you'll have to send the missile up the line to the guys who have the tools and know-how to remove and replace the nut. And no matter how you slice it, it means going to a lot of work to take care of something that can be halted before it starts.

Another thing . . . you can also louse up the works by using an elevon bolt in the wing bolt hole. The elevon bolt is some ¼ inch longer'n the wing bolt . . . and it won't seat fully, no matter how much you try to tighten it.

Dear Half-Mast,

We've got a problem with one of our Hawk missiles.

The metal strip bonded to the rear leading edge of one of the wings—smack in front of the elevon mounting bolt—is getting loose.

What now?

Sgt D. B.

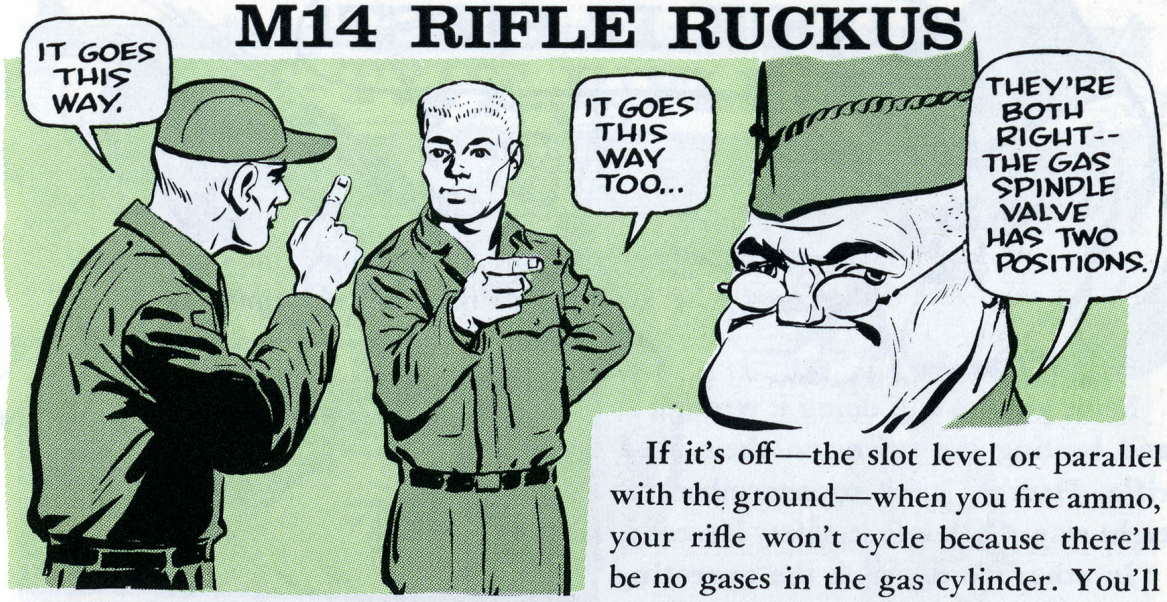
Dear Sergeant D. B.,

Nothing till you get the wings back to your support unit for a bonding job without fouling up the tactical mission of the battery. You can figure that it'll take better'n a day to do the job.

Until you get this kind of time for the work, don't worry. That metal strip being loose won't hurt anything if you have to fire the bird in anger.

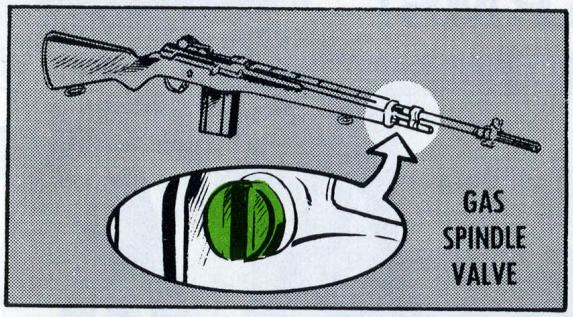
Half-Mast

M14 RIFLE RUCKUS

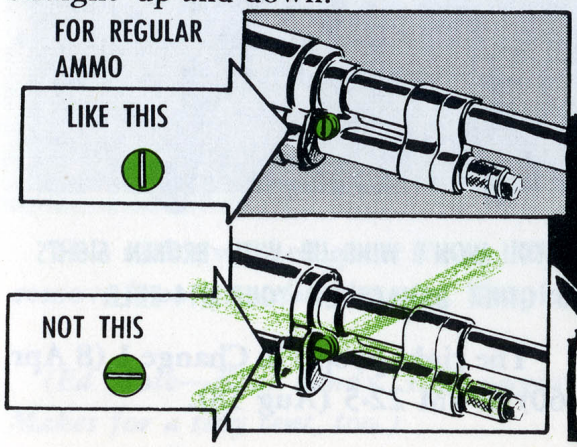


Now, hey there, young soldier, so brave and so bold, listen to this like your life depended on it . . . because it does.

It's all about the right position for the gas spindle valve on your M14 rifle.



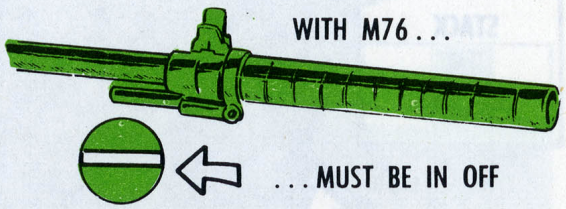
It has to be on when you fire regular ammo—with the slot in the valve straight up-and-down.



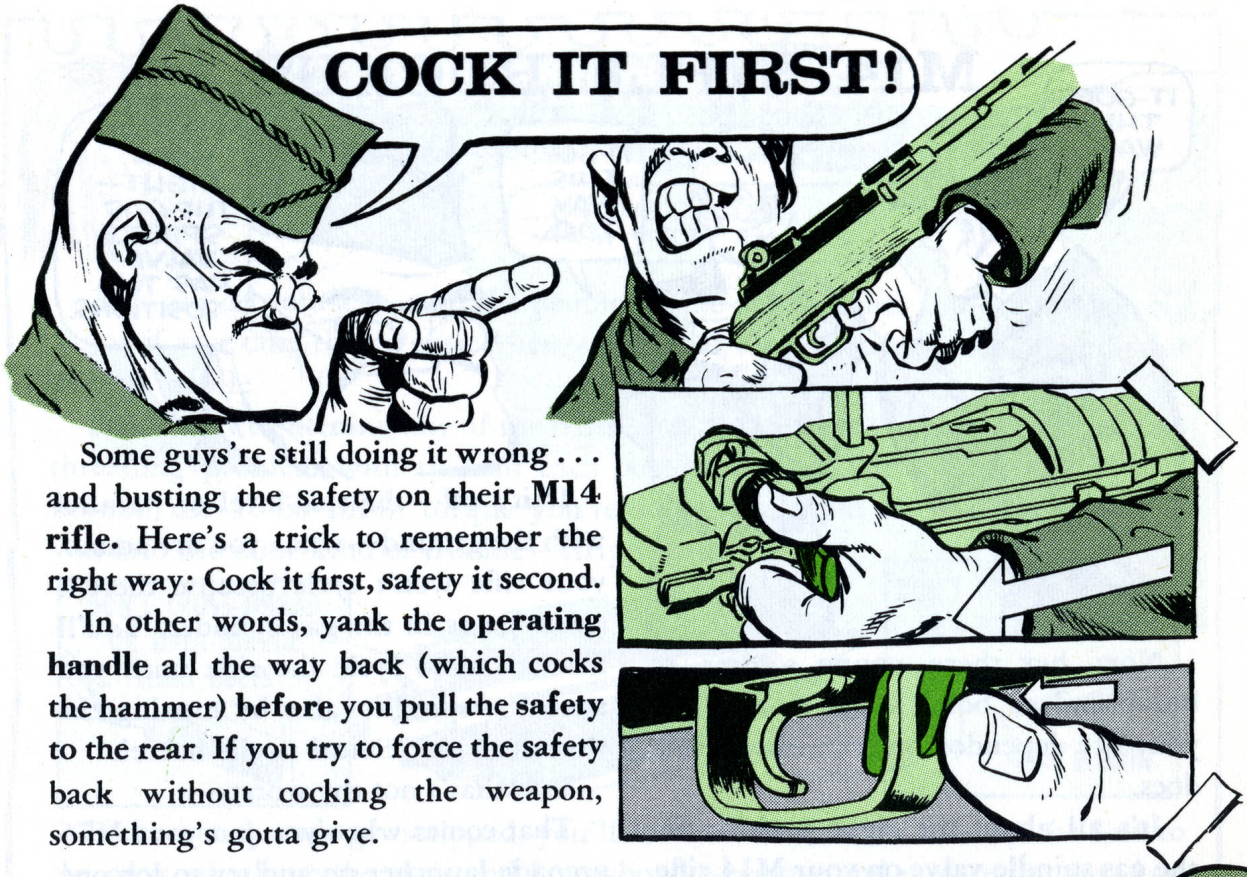
If it's off—the slot level or parallel with the ground—when you fire ammo, your rifle won't cycle because there'll be no gases in the gas cylinder. You'll have to hand cycle the rifle until you open the spindle valve by moving the slot until it's vertical to the barrel.

But, that's not the worst—

That comes when you put your M76 grenade launcher on and try to lob one out there in left field. Before you pull the trigger make sure . . . real sure . . . that's SURE . . . that the spindle valve is in the OFF position, with the slot level

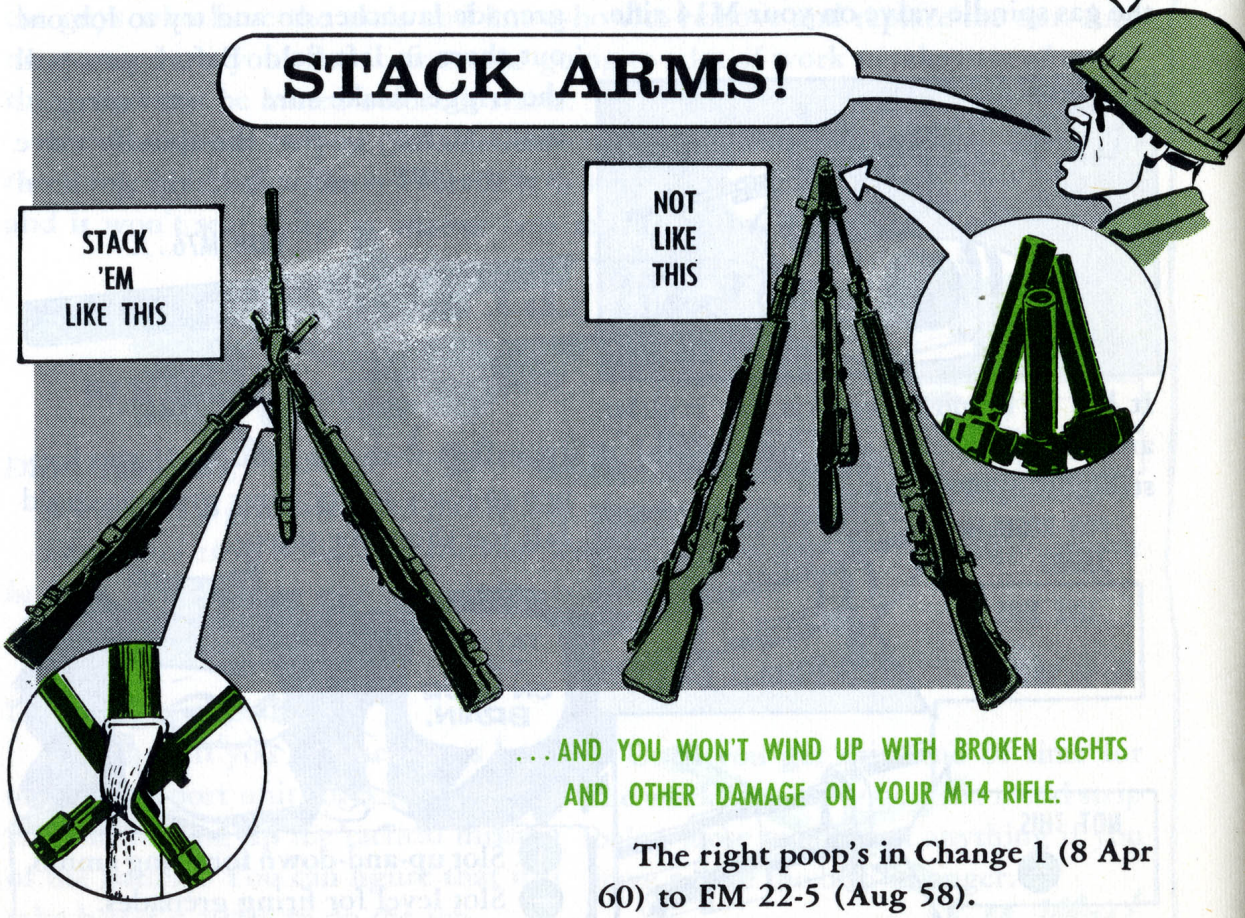


(parallel) with the ground. If you happen to leave it ON, your grenade could fall too short for safety.



Some guys're still doing it wrong . . . and busting the safety on their **M14 rifle.** Here's a trick to remember the right way: Cock it first, safety it second.

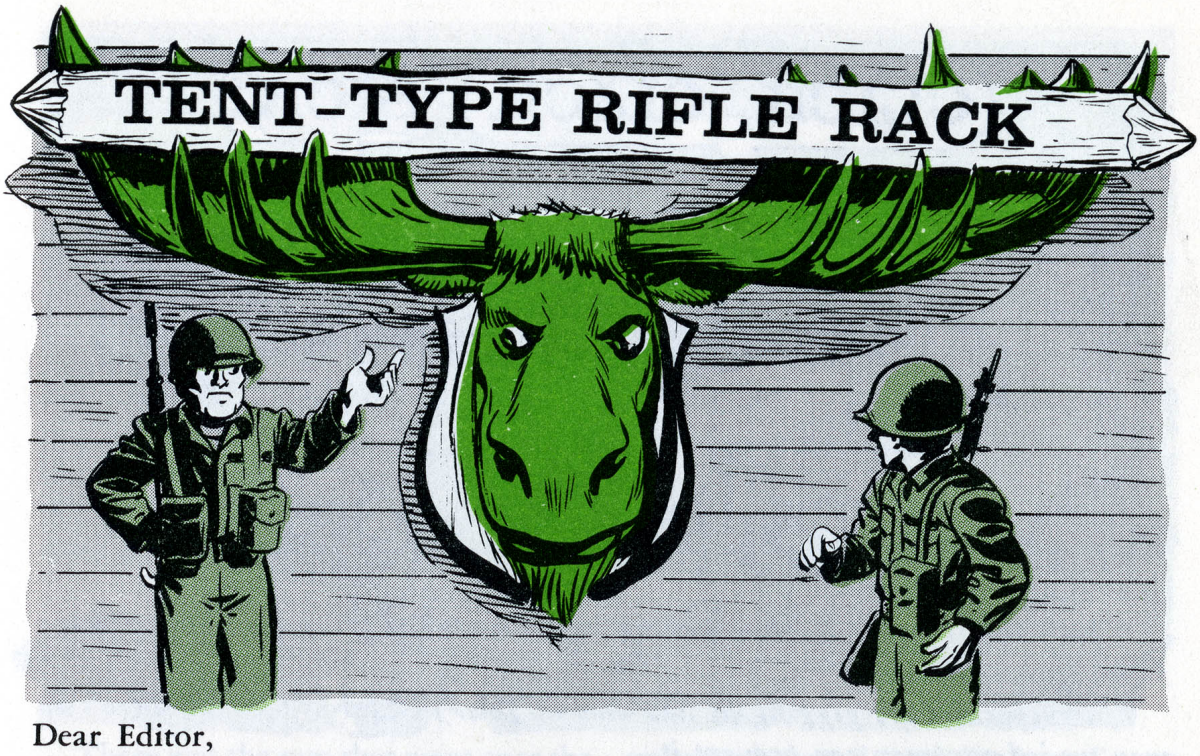
In other words, yank the **operating handle** all the way back (which cocks the hammer) **before** you pull the **safety** to the rear. If you try to force the safety back without cocking the weapon, something's gotta give.



. . . AND YOU WON'T WIND UP WITH BROKEN SIGHTS AND OTHER DAMAGE ON YOUR M14 RIFLE.

The right poop's in Change 1 (8 Apr 60) to FM 22-5 (Aug 58).

TENT-TYPE RIFLE RACK

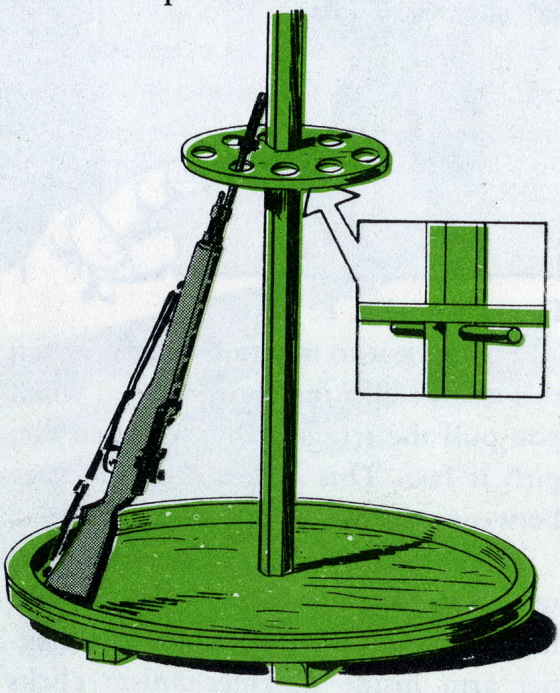


Dear Editor,

It's sure a problem where to park your M14 rifle when you're working in a general purpose tent. At least, it was for us till we dreamed up this rifle rack made out of two pieces of ¾-in plywood and a couple 2x4's.

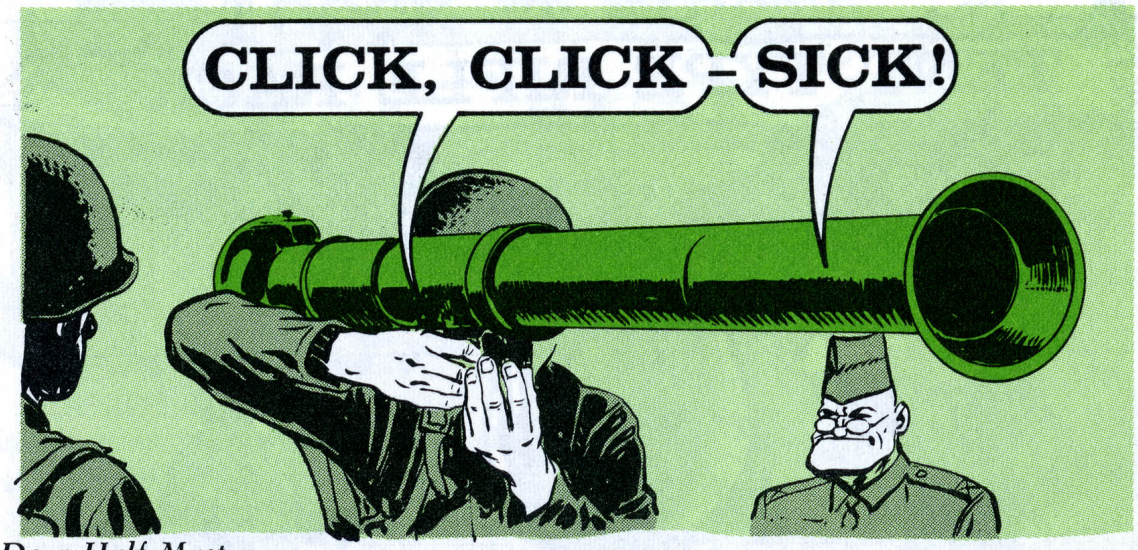
Here's how to make it:

1. Cut two circles 26 inches in diameter. Put a 3-in hole in the center of one and set this piece aside for the base of the rack.
2. Next, cut a 24-in circle in the other piece. This'll leave a 2-in ring you can nail to the top of the base.
3. Cut a 13-in circle from the piece that's left over, and make a 3-in hole in its center to fit around the pole. This'll be the top of the rack. Now cut eight ⅞-in holes equally spaced one inch from the edge to receive the rifle muzzles.
4. To assemble, nail the base piece on two 20-in 2x4's, one of which'll go on either side of the tent pole. At the right height, drill a ¼-in hole through the tent pole and insert a pin or spike nail to hold up the top plate.



This rack's worked great for us. We set up the rack as we pitch the tent and remove it as we strike the tent. Simple as that.

(Ed Note—Real handy. This ought to help keep your rifles in top shape. Makes for a tidy tent, too.)

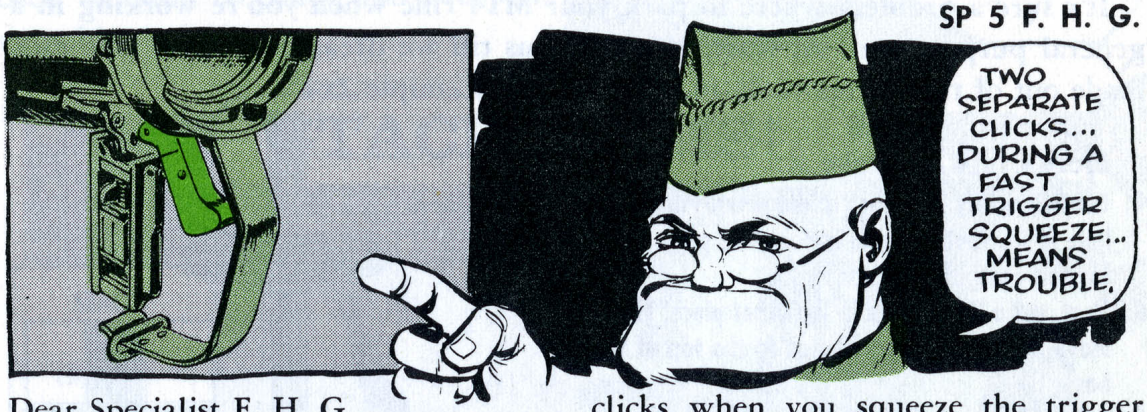


Dear Half-Mast,

What's the story on double-clicking in the electrical firing mechanism of the 3.5-in rocket launcher?

The inspectors are gigging us like mad on this. Yet, far as I know, there's no way we infantrymen can prevent it.

SP 5 F. H. G.



Dear Specialist F. H. G.,

You forgot to mention exactly when this double clicking shows up . . . when you pull the trigger slow or when you pull it fast. This makes the difference between gig and no-gig.

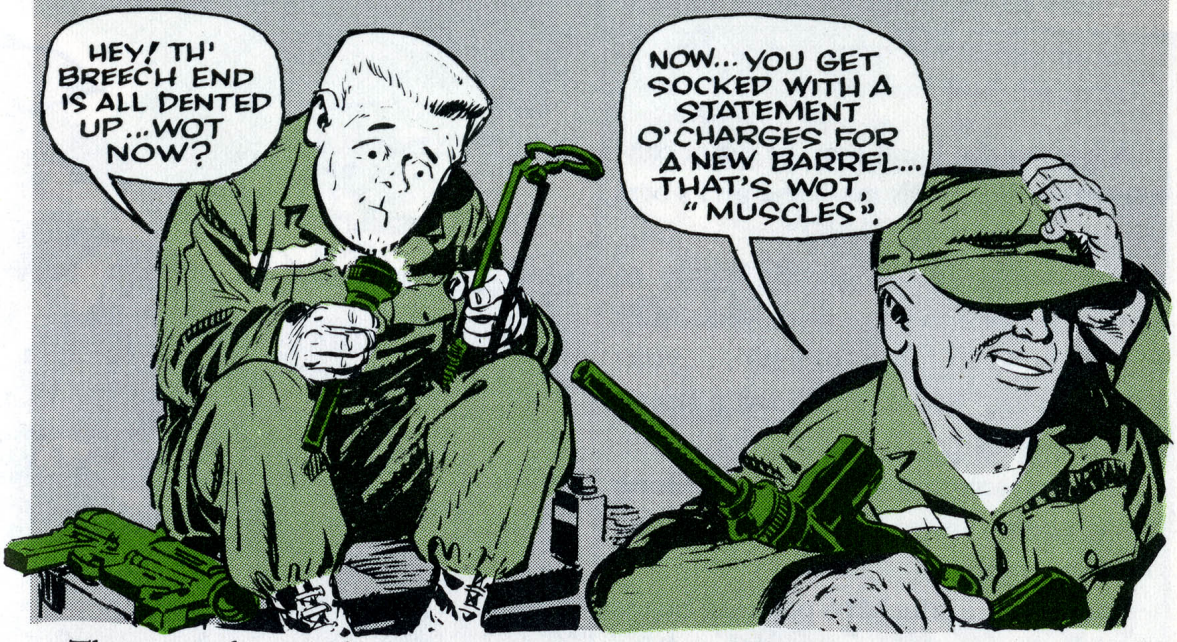
If it happens during the slow squeeze, no sweat. Don't you worry about it and neither should the inspectors. The magnet arm inside the mechanism clicks coming and clicks going against the magnets and you can hear it both times in slow motion.

But if you can hear two separate clicks when you squeeze the trigger fast, hold everything. This means the adjusting screw's worn or has worked loose away from the trigger latch. It's got to be adjusted by upper category guys. Field and depot people are the only ones authorized the electrical tester that's needed to check that the screw's set just right.

So . . . all you can do is look 'n' listen and yelp for help if there's a double click when the trigger's snapped smartly.

Half-Mast

RAM THIS IN YOUR NOGGIN



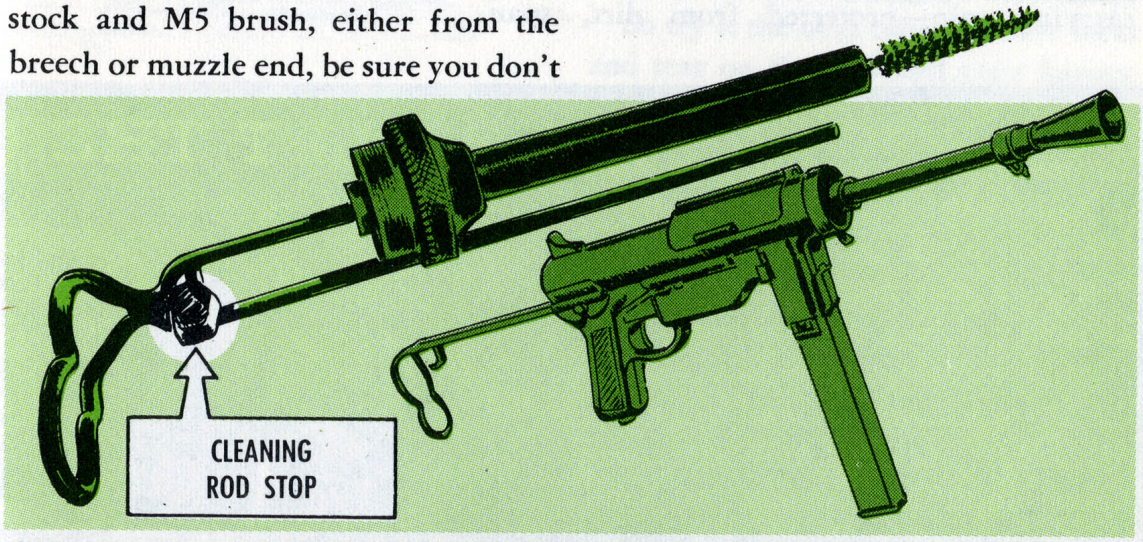
There was the ram that went over the cliff 'cause he didn't see the ewe turn.

And there was the "ram" that put the M3 and M3A1 submachine gun out of action 'cause some Joe didn't. . . .

Anyhow, this is the "ram" you want to watch out for.

Here's the scoop: When you clean the barrel of your weapon with the stock and M5 brush, either from the breech or muzzle end, be sure you don't shove it so hard that the hand loader and cleaning rod stop rams the muzzle or collar. You'll feel real sheepish if either's damaged, and the barrel's got to be scrapped.

Tain't hard. The barrel assembly's only 8 inches long, while the working part of the stock, from the end of the rod to the stop, is 10 inches long. Add 3⅜ inches for the brush and you have a good 5 inches to maneuver in.



With a little care you won't have to let the stop even touch the collar or muzzle end.

ONE-TWO-THREE . . .

A kiss on the hand may be quite continental—diamonds may be a girl's best friend—and all that jazz.

But, when you're getting ready to zero in on indirect fire with your M29 81-mm or M30 4.2-in mortar . . . your M16 plotting board is as good a friend and helper as you'll find.

So why treat it like it's a life-long blood enemy instead of a fellow comrade in arms?

Face it, man, the M16 plotting board is not built to stand any rough handling or abuse. The only thing rugged treatment will buy you is trouble—like inaccurate readings and a busted board.

Keep your board as clean and dry as possible. Don't let it bake in the direct rays of the sun or store it on heated radiators. When you're not using it make sure the board's in it's M105 carrying case—protected from dirt, dust, moisture, chipping, scratching and other things figured to cut short it's life span.

LET THERE

If you're getting blear-eyed and can stand a little more light on some of your fire-control instruments—SB 9-206 (Mar 62) is the pub for you.

It gives your supply section the OK to local purchase 1½-volt, type E94, alkaline energizer batteries to replace the 1½-volt BA-30's found in the M2, M12, M22, M28 and M37 instrument lights and the M41 aiming post light.

The replacement doubles the voltage because it's a two-for-one deal with a pair of the E94's taking the place of

ONE-TWO-THREE . . . WITH TLC

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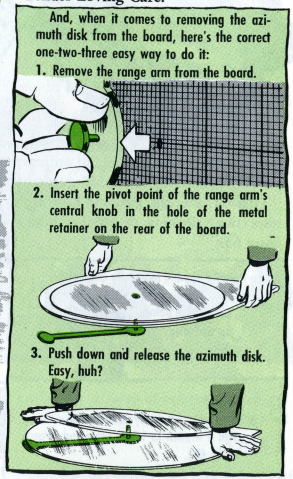
In other words—give it plenty of Tender Loving Care.



So try it the next time and save wear and tear on the disk and your fingers.

LET THERE BE LIGHT

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The replacement doubles the voltage because it's a two-for-one deal with a pair of the E94's taking the place of each single BA-30 battery. And there's no sweat on the swap because the newer E94's are only about half the length of old jobs.

Speaking of sweat—the E94 is kinda allergic to high temps and when it gets too hot it's likely to ooze and loose its power. So get the habit of removing and storing the batteries in as cool a place as possible when the job calls for working in hot places. Natch, replace 'em for night details.

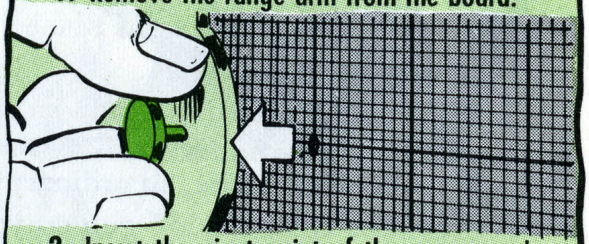
Local purchase is the only way your supply people will be able to help you make the switch at this stage of the game because the alkaline energizer batteries aren't available in the supply system.

WITH TLC

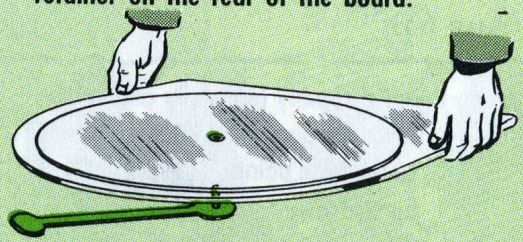
In other words—give it plenty of Tender Loving Care.

And, when it comes to removing the azimuth disk from the board, here's the correct one-two-three easy way to do it:

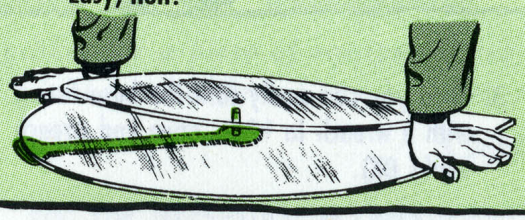
1. Remove the range arm from the board.



2. Insert the pivot point of the range arm's central knob in the hole of the metal retainer on the rear of the board.



3. Push down and release the azimuth disk. Easy, huh?



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BE LIGHT

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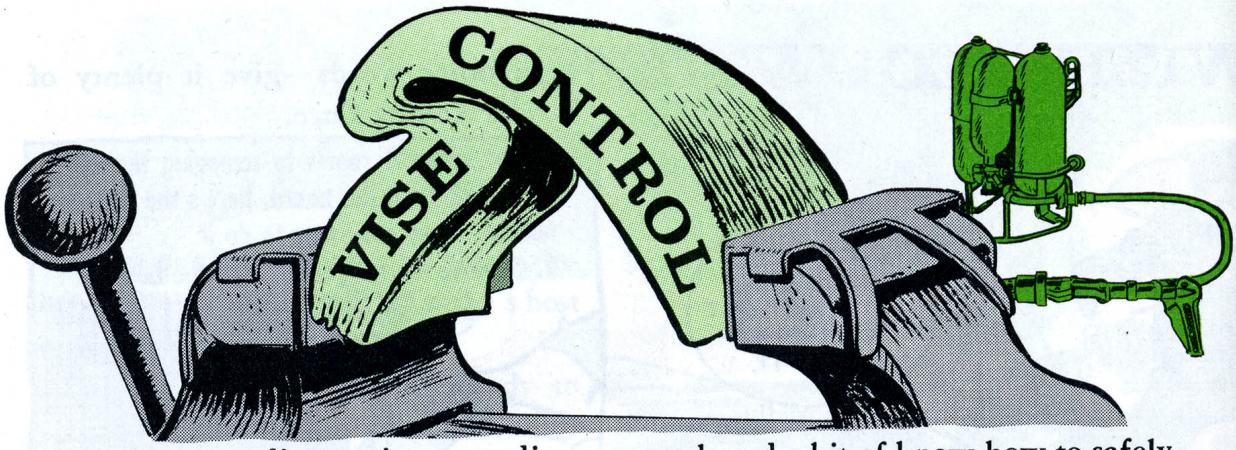


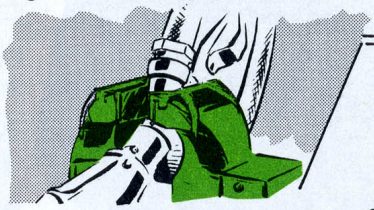
It takes an ordinary vise, an ordinary wrench and a bit of know-how to safely remove the hose from the M7 gun on your M2A1-7 portable flame thrower.

First off, tho, the gun and hose are to part company only when necessary for inspection, cleaning or repairs. Like it says in para 35, TM 3-1040-204-30 (Aug 63).

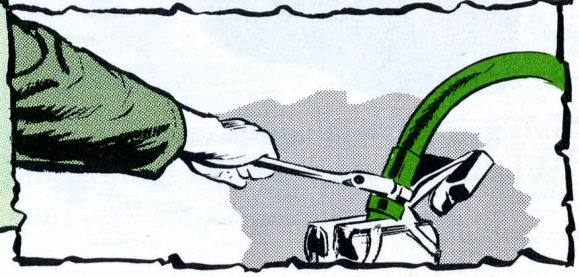
To do the disassembly job easily and safely:

1. Place the gun in the vise so the hose points up and away from you.

2. Position the gun so the vise clamps only the gun's inlet body.



3. Then you can easily turn the hose fitting with a wrench (a 12-in. open end wrench works OK).

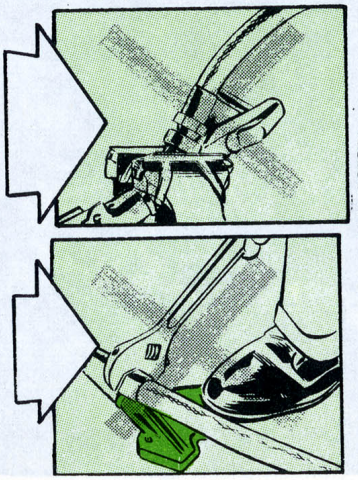


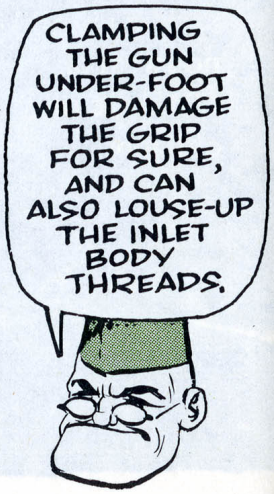
CAREFUL—Be sure to use soft jaw caps on the vise so as not to chew up the inlet body.

You clamp the gun in the vise the same way when you go to connect the hose to the gun.

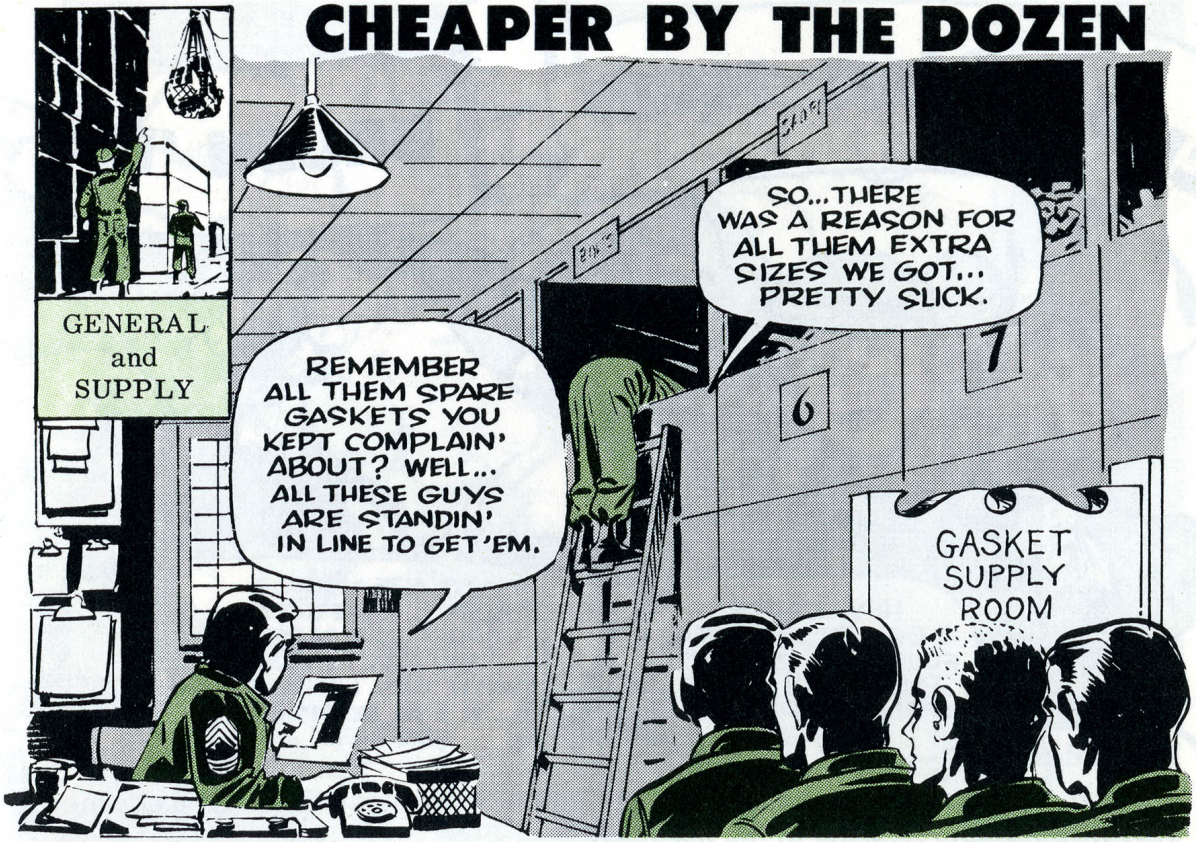
CAREFUL! The one thing you never, ever do (when you assemble or disassemble the gun-hose connection) is place the gun's grip (the valve grip, that is) in the vise. That kind of force cracks the grip.

Also, never, ever step on the gun grip to quick-like unscrew the hose from the gun or tighten the hose to the gun.





CHEAPER BY THE DOZEN



Dear Half-Mast,

How come when we order a certain gasket for a piece of equipment we get a package containing the one we want plus others of different sizes? I know that we'll never use some of the gaskets.

S Sgt C. T.

Dear Sergeant C. T.,

There're a coupla reasons . . . and they're tied together by one word—cost.

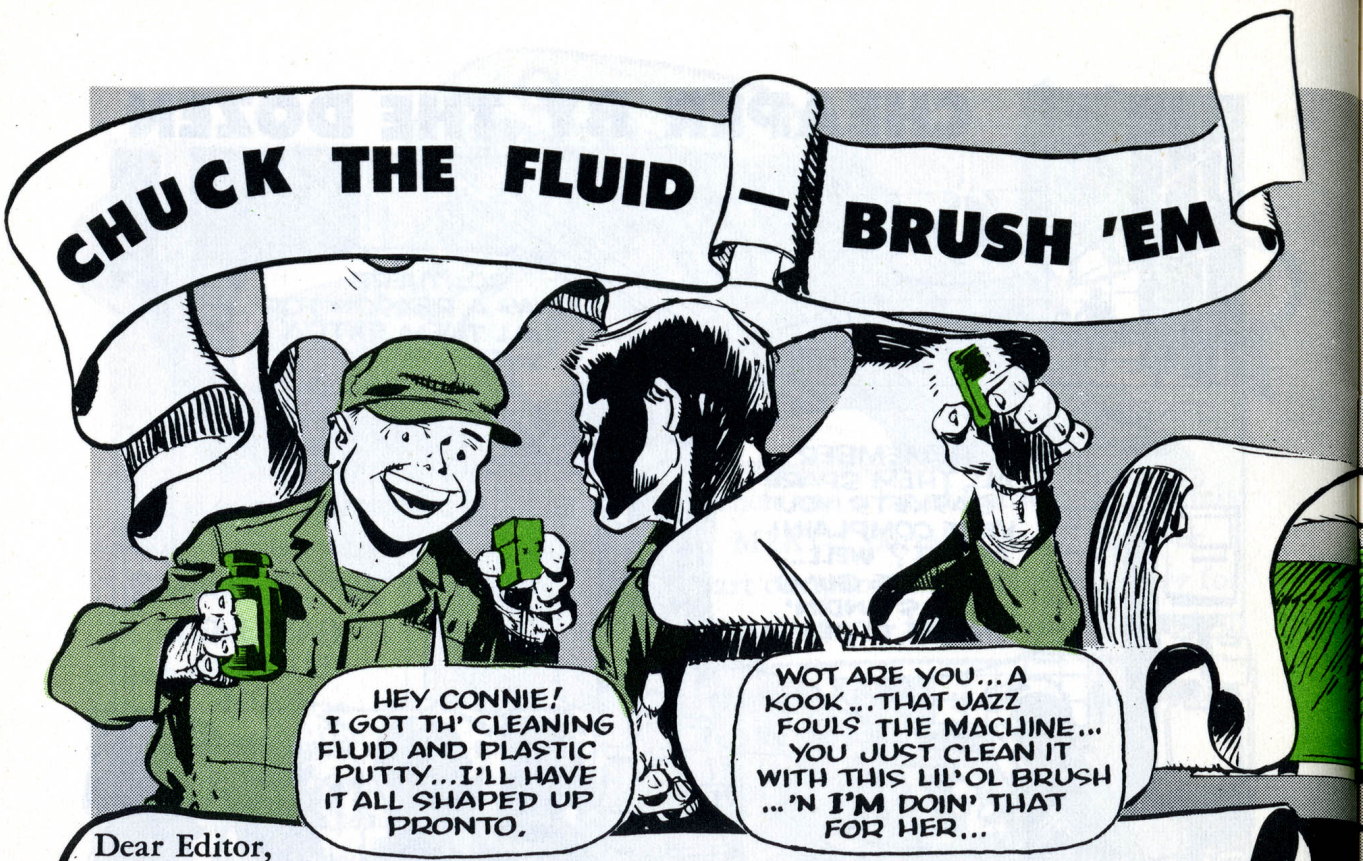
For one thing, it's cheaper—in the long run—to package and stock groups of low-cost parts (like gaskets) than it is to package individual parts separately.

Then, too, all or a portion of a package of low-cost parts can be used on items that do the same job but which're not quite the same size, shape and the like—such as carburetors and distributors.

With this deal, you have enough parts to repair several different models of an end item because some of the components of each are the same. The parts that're left over after you've made the repairs are those that go with another model of the end item.

And sets or kits contain enough components for you to do a real good repair job on an end item. So if you're replacing a shot accelerating pump in a carburetor, don't stop with the pump. Use all the components that're in the kit for that particular carburetor.

Half-Mast

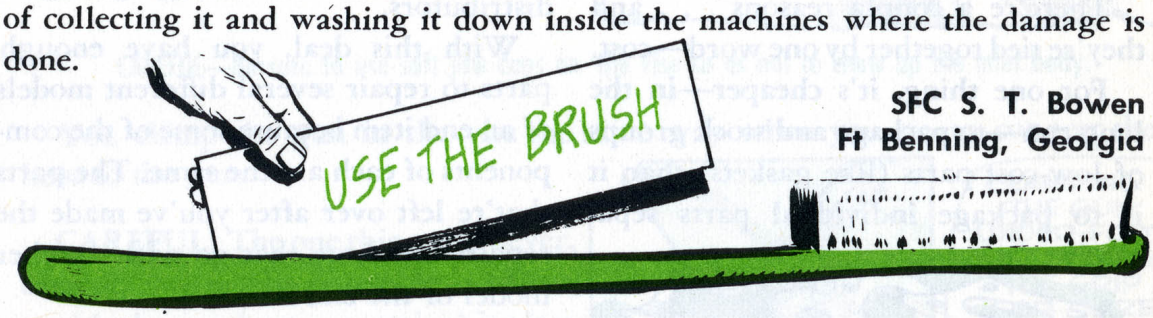


Dear Editor,

Fluid cleaners that are being issued to typewriter operators for type cleaning are causing costly damage to the machines.

These fluids stick to the type-bars, and cause dust, paper fibers and eraser shreds to stick to the bars. Then a new application of fluid washes this sticky grit into closely fitted parts and this puts the machine on the blink and into the repair shop.

Why can't we do away with fluid type cleaners and have the operators use plastic putties for cleaning? They'd pick up the grime and take it out—instead of collecting it and washing it down inside the machines where the damage is done.



SFC S. T. Bowen
Ft Benning, Georgia

(Ed Note—Fluid type cleaners are not authorized for use on Army typewriters by operators, Sarge. They're to be used only by typewriter maintenance men, so you're right on that score. But operators are supposed to brush the type-bars daily, with a toothbrush-shaped brush, FSN 7510-550-8446. This costs less than plastic putties and adhesive-treated paper cleaners. The brush is found in Federal Supply Catalog C6-14-SL (1 Dec 63). It's also available from General Services Administration.)

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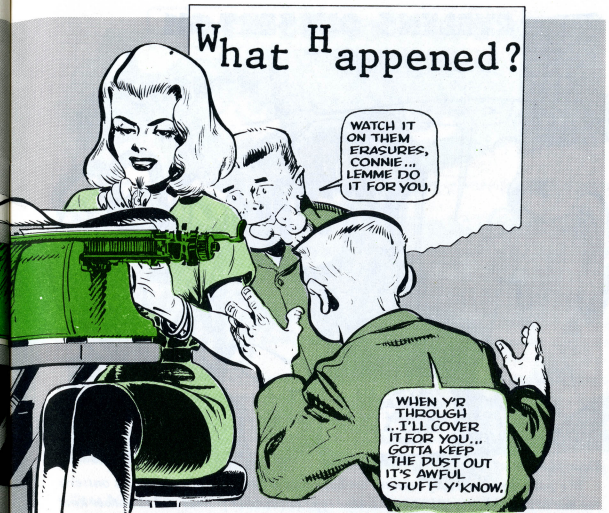
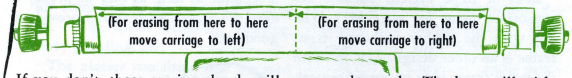


Experience may be the best teacher for some things, but that's the hard way to find that it doesn't take much to put your typewriter out of working order.

When you have to erase, move the carriage to one side:

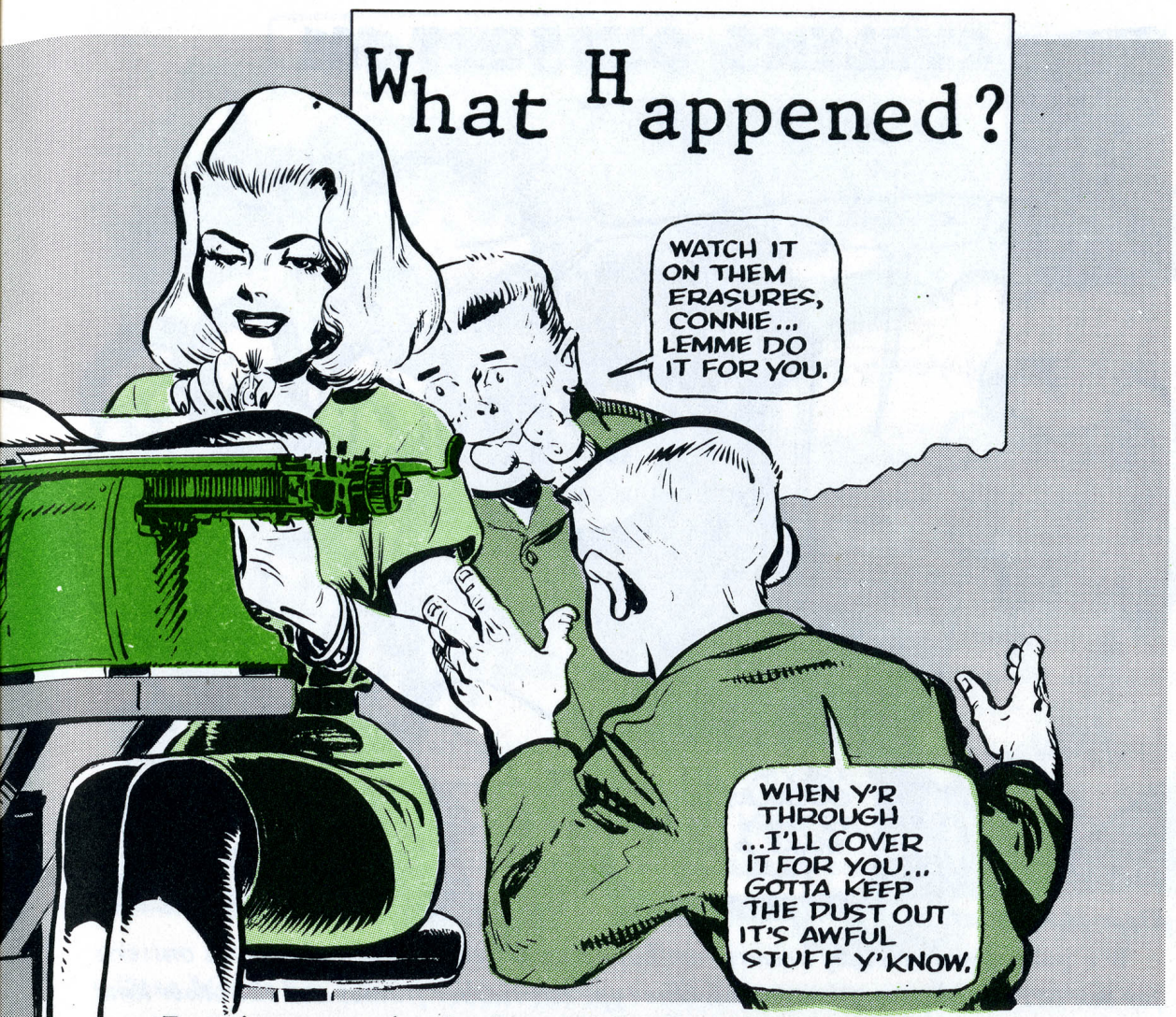


If you don't, those erasing shreds will gum up the works. The keys will stick, and then the type looks like it's stuttering.

There's something that's even worse that you can't see—it causes wear on the parts.

Another thing that will make your typewriter head for the shop is to use it as a resting place for your coke bottle or coffee cup, and then accidentally spill some inside.

And, when you're not using your typewriter, cover it up so dust won't get into it.



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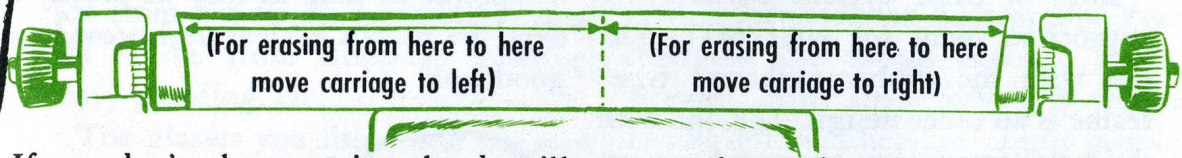

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EYELENS OUTSERT M1

Dear Half-Mast,

We got gigged recently because we have two different kinds of eyelens outserts for our M17 field protective masks. One type has rubber frames and the other kind has metal frames. Which outsert should we use, and what's the stock number for it?

SFC J. W.

Dear Sergeant J. W.,

Both of those eyelens outserts are authorized items for your M17. The one with the rubber (adhesive type) frame is an older design. The one with the metal frame is an improved outsert.

There is also a later version of the outsert which has a metal frame with prongs.

All three have the same stock number (FSN 4240-678-0731, Outsert eyelens, M1). Eventually, the outsert with the crimped metal frame will be the only one issued . . . until then, all three are acceptable as long as they fit properly over the mask's eyelens and provide a good seal.

GOOD LOOKIN' SPECS

Dear Half-Mast,

In the past our shop has used the following safety glasses for critical work on electronic chassis:

1. Safety glasses (4240), Cat No. FX 9549 (Lens 48, nose size 26, temple lg, adj nose pads, butt type, cable temples and perforated, clear acetate side shields).

2. Safety glasses (4240), Cat No. FX 9447 (Lens 46, nose size 24, temple lg, CC 6¾ -in).

Frame, temples and side shields on above glasses are resistant to corrosion and non-sparking.

Recently both types of glasses were replaced by: Safety glasses, FSN 4240-269-7912, which aren't any good for our kind of work. They are bulky, heavy and uncomfortable, and they limit a worker's visibility.

How about an FSN that'll get us the glasses we need, or some others which are just as good?

CWO D. T.

Dear Mister D. T.,

Here's the story on your specs:

The glasses (FSN 4240-269-7912) which don't suit you are actually industrial goggles. They're for protection from fast flying, large-sized particles — like from chipping, riveting, heavy grinding, etc.

The glasses you listed first are now called industrial spectacles, and they're available under FSN 4240-516-4529 (for size 26).

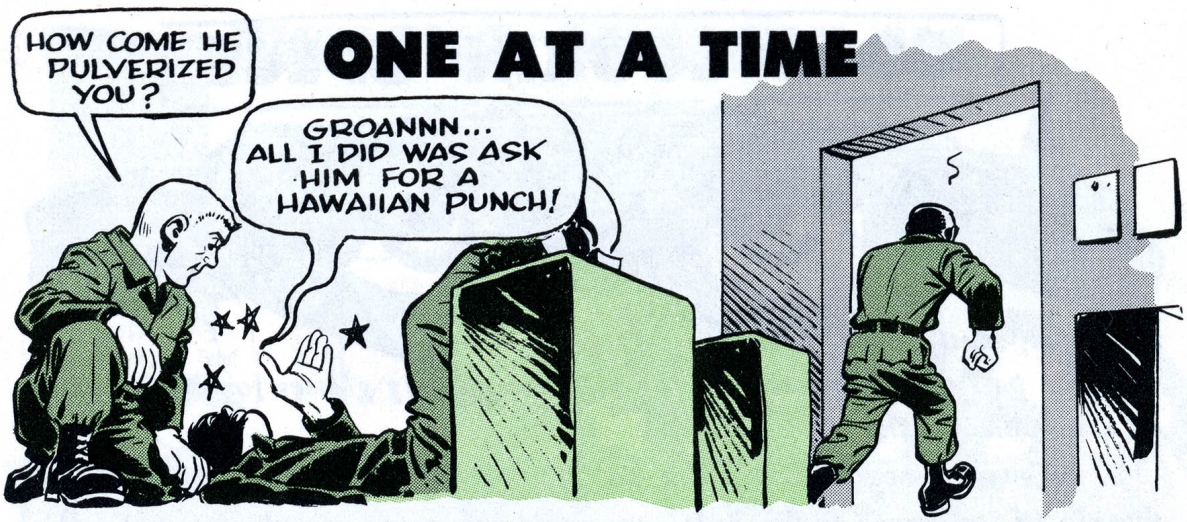
The other glasses your shop prefers are also called industrial spectacles, and you can get them with FSN 4240-516-4531 (for size 24).

So ask for spectacles . . . not goggles or safety glasses, when you order.

And, be sure to use the above FSN's . . . that way your supply support can set up a requirement for the needed item. (Your supply in turn will send its annual requirement for the specs to: Commanding Officer, Ammunition Procurement and Supply Agency, Joliet, Illinois, Attn: CBR Section B QSSB. This'll tell the Chemical supply people which item's needed, and they'll set it up so's you'll be able to get the right specs each time you order.)

Any other scoop you need on spectacles or goggles is in Military Supply Standards (MSS) 4240-1, 28 Dec 61. Your supply support outfit should have a copy of it.

Half-Mast



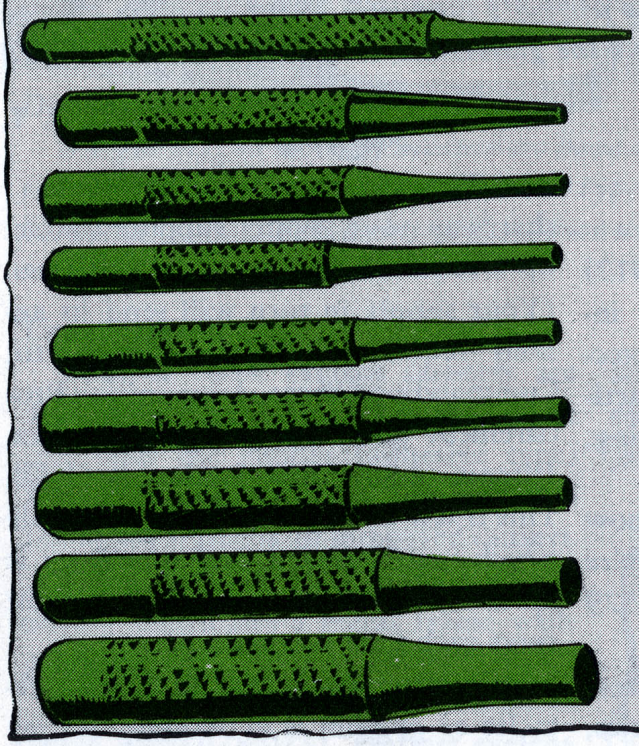
ONE AT A TIME

Getting punchy from replacing drive-pin punch sets by the carload?

But still in bind 'cause you're loaded with incomplete sets—and still seem to always be missing just the one size some mechanic needs?

Try the easy way. Replace each punch as needed.

FSN 5120-883-3003 gets you the complete set of ten punches, but here's the FSN breakdown for each individual punch. So get the unit replacement habit—it saves time, money and overstocking.



FSN	Diameter of Point	Length of Point
5120-240-6082	1/16	1/2
5120-242-3435	3/32	11/16
5120-242-5966	1/8	3/4
5120-240-6104	5/32	13/16
5120-293-0791	3/16	15/16
5120-293-0792	7/32	1
5120-240-6083	1/4	1
5120-293-0793	5/16	1
5120-273-0001	3/8	1

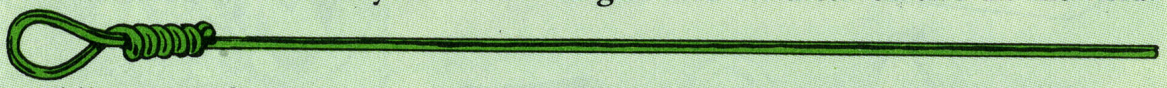
This set is listed on page 1001, Federal Supply C6-5-SL, Vol. 3 (SM 10-1C6-5-SL), May 1961. However, watch it because it's listed there as FSN 5120-596-1121—the old FSN that was good before the powers that be switched numbers. FSN 5120-883-3003 is the good number.

HOW TO THREAD A TARP

Dear Editor,

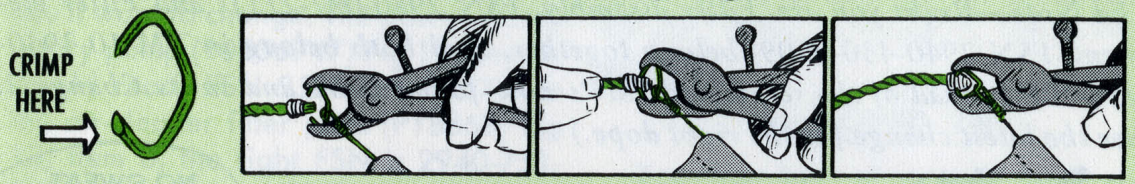
If there's anything more aggravating than trying to thread a rope thru the hem of a tarp, I'd like to hear about it.

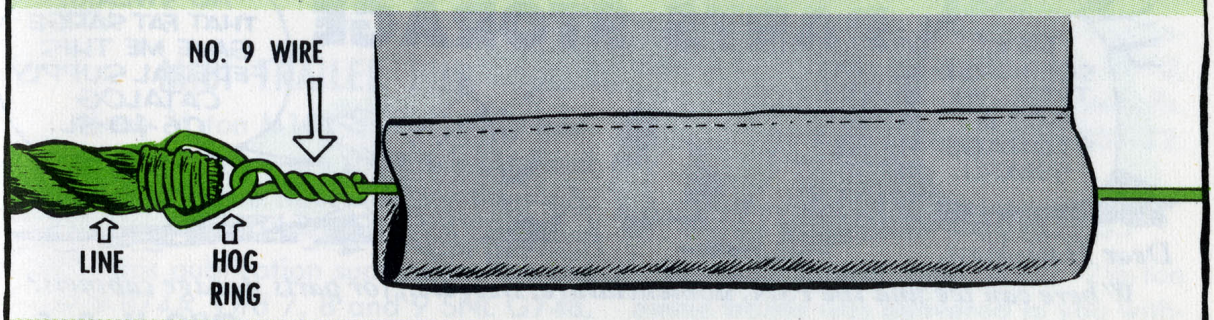
Fact is, it got so aggravating, we did something about it some time ago. You're welcome to it if you think it might save an ulcer or two in the field.



All you need is a length of fairly stiff wire (No. 9 wire works fine) and a hog ring (used to hold auto seat covers, etc.). You can pick up the wire and hog rings at most hardware stores, or make them yourself out of scrap material.

Now, loop an eye on one end of the wire and feed the looped end thru the hem of the tarpaulin. Slip the hog ring thru the wire loop . . . and crimp the hog ring to the rope with pliers or a hog ring tool.





Pull the wire and rope thru the tarp hem, remove the hog ring, and that's it.

Roll up the wire and store it until it's needed again.

The whole deal takes less time than it does to describe it. A coupla' minutes does the job.

John Stewart
Ft Irwin, California

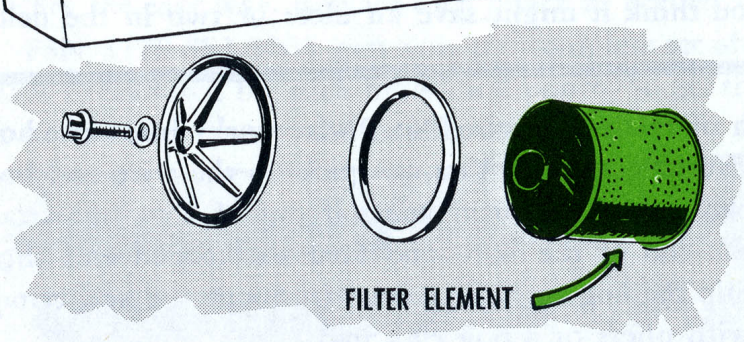
TOGETHERNESS

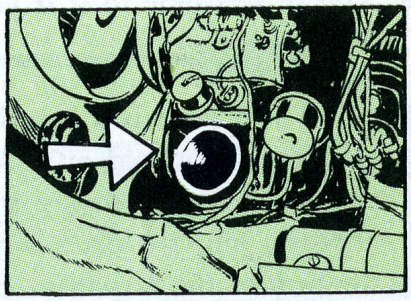
Dear Editor,

The filter element, FSN 2940-426-2010, listed in TM 10-3930-224-20P for the MHE 166 fork lifts doesn't fit the filter, FSN 2940-097-2711, that's installed on 'em.

When a replacement's needed we use Filter element, FSN 2940-430-0609, which fits the filter. Shouldn't the -20P manual list this element?

H. Kumamoto
APO 67
San Francisco, Calif.





(Ed Note—Right you are. Filter assembly, FSN 2940-097-2711, and Filter element, FSN 2940-430-0609, belong together. And both belong in TM 10-3930-224-20P instead of the scrambled FSN's now found there and in its Change 2. See the latest change for the right dope.)

PARTS STORAGE

Dear Half-Mast,

Where can we find the FSN, nomenclature, size, etc., for parts storage cabinets?

CWO H. P. S.

Dear Mister H. P. S.,

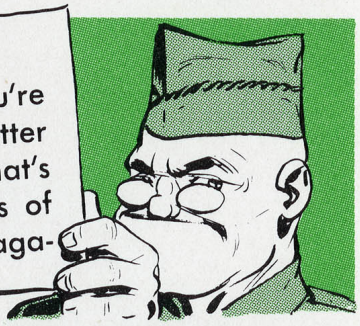
Ask your publications section (or check your outfit's technical library) for Federal Supply Catalog C6-10-SL (1 Nov 63), "General Supplies, FSC Group 71." See pages 62-75 for complete info (and some illustrations) on bins, cabinets, and other storage equipment.

Half-Mast

Connie Rodd's BRIEFS

NEW DA PAM 38-750

There's a new improved DA Pamphlet 38-750 out. If you're working with the Army's equipment record system, better order some copies on DA Form 17. It tells a lot about what's new with the revised records system. There are scads of pictures and filled out forms . . . looks a lot like PS Magazine, for some reason.



NEW FSN NUMBERS

So you have an M107 175-mm SP gun? Or is yours an M110 8-in SP howitzer? No matter . . . Your TM 9-2300-216-20P (Jul 62) has a couple of FSN's you'll want to change. The power-driven rotary pump (10906747) Fig 10, Item 2, should read, FSN 2520-860-0557. For the air-cleaner filter pack (P18868) Fig 13, Item 8, the right FSN is 2940-751-7090.

M101 TRAILER PUB

Many ¾-ton M101 and M101A1 cargo trailer owners are still having a hard time finding the latest TM for their rig. The latest is TM 9-2330-202-14P (Aug 62). This publication supersedes the old TM 9-874A, Ord 7, 8 and 9 SNL G748, and TM 9-2330-256-14, which covered the ¾-ton M116 trailer chassis. Although the latest pub is a -14P, it still covers all on your M101 and A1.

WANNA KNOW SOMETHING...?

When it comes to pubs on cleaning, preserving, packaging, storing or shipping, SB 9-156 (25 Jun 63) lists 'em by the dozens. It's called "Publications for Packaging Army General Supplies." Don't pay any attention to the number TM 10-1-3600 on page 1. The printer goofed.

ENERGIZER TM

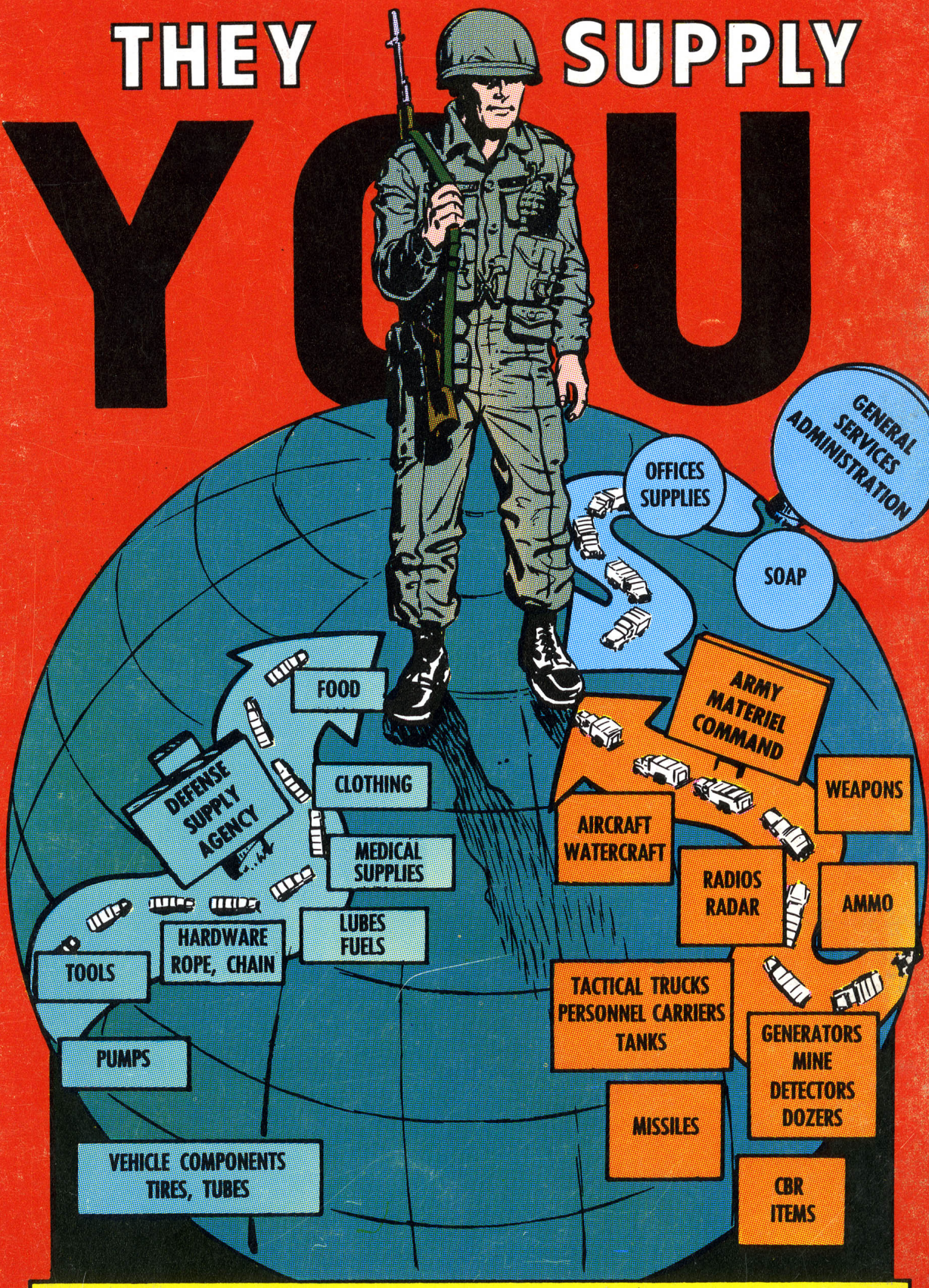
You air-types who have been patiently looking for a pub on engine-starter energizer, Model No. 8D-28-10, FSN 1730-863-5743—rest your eyeballs. The pub you want is TM 55-1730-207-12.

M332 TRAILER COUPLINGS

So your brand new M332 2½-ton ammo trailer was delivered to you without any dummy coupling covers. That happened on some of them. No sweat, tho. Just requisition dummy coupling assembly FSN 2530-797-9294.

Would You Stake Your Life right now on the Condition of Your Equipment?

THEY SUPPLY YOU



GLOBAL SUPPLY FOR GLOBAL DEFENSE